

WHO'LL BE TOP DOG IN '59? MOTOR TREND

NOVEMBER 1958 35c

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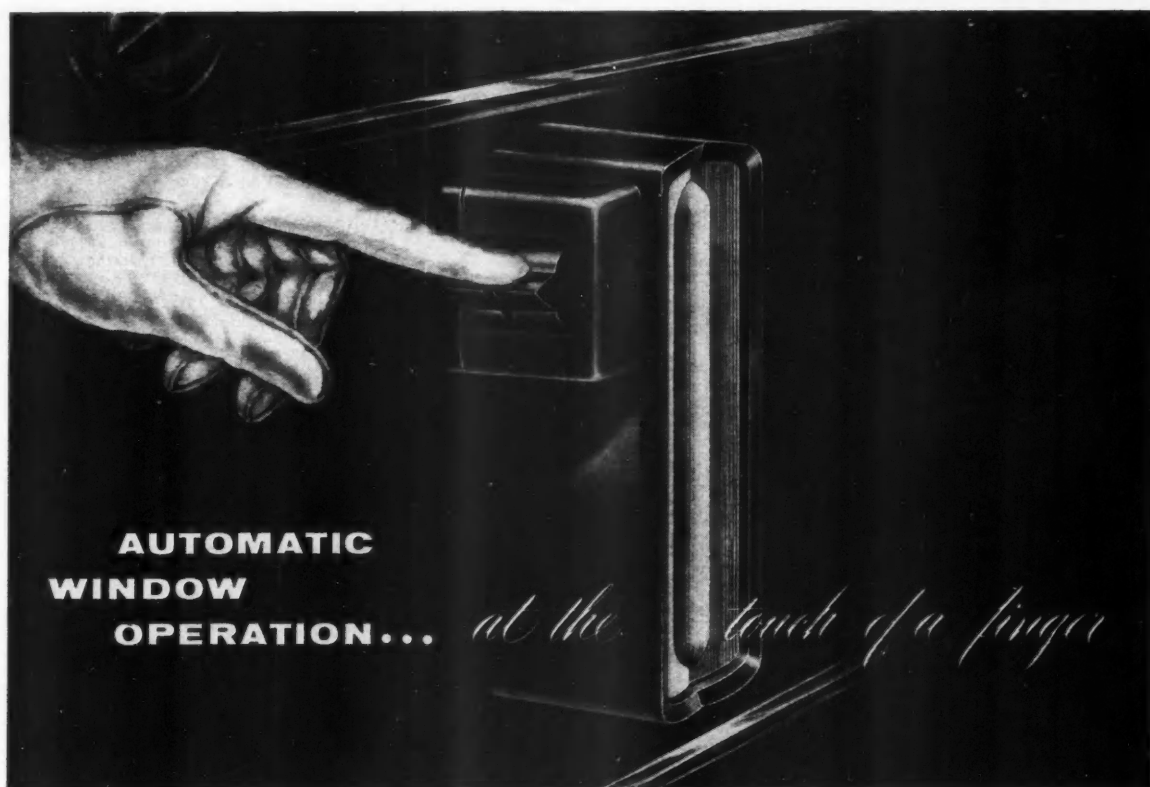
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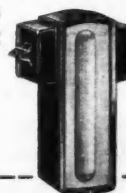
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NEXT MONTH

Comparing Small Stude, Rambler
135-mph Stock Chevy!
Weird Engines

MOTOR TREND



THE COVER:
Going all-out to retain its top position, the '59 Chevy makes an immediate impact with its all-new styling. Shown are the Impala sport sedan (above) and the Impala sport coupe. Courtesy of Chevrolet Division.

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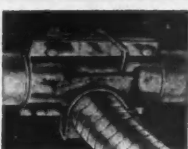
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MEMO FROM THE EDITOR

THE RESPONSE TO OUR REQUEST asking for your comments on what you think about today's Detroit products has been very gratifying. In our desire to serve as "The Voice of the Motoring Public . . . campaigning for better and safer cars," we are organizing these letters into groups, and will soon launch our series of articles on "What Detroit's Cars Need."

We not only want to take this opportunity to thank each of you who have answered our request, but also give you a quick summation of the general tone of the letters.

The two items that seem to be paramount on the list are the matter of styling ("too garish," "copycat trend," "distortion from wrap-around windshields," "styling obsolescence," etc.), and the desire for more basic transportation ("don't like dull, robotic driving," "want less gimmicks to go wrong," "more comfort, less style," etc.).

From our first look at the new crop of cars it seems that Detroit might finally be paying a bit of attention to both of these points: many of the new cars are definitely less garish (the less the better, as far as we're concerned), and at least one manufacturer is returning to a design that is more along the lines of "basic transportation" (see page 10). We hope others will follow suit.

Following these two items in importance is the plea for better quality control. It seems from the tone of the letters received that the main reason for switching to an imported car is that they know the car they buy will be built well. We'll be watching the new cars with interest, for again Detroit is touting this year's quality control as being better than ever. We'd also like to hear from new car purchasers.

Sharing equal importance are the requests for more inbuilt safety, better brakes, and more comfort. For '59 not too much has been done about safety, except in the matter of better roadability of some lines, along with improved brakes. (How the latter will fare in our rugged brake fade tests will be yours to read in future issues.) If anything, for '59 there will be less comfort, what with lowered rooflines. It might be safe to assume that the ultimate has been reached in lowness. We hope so, otherwise we're all going to have to take some size-reducing pills or build bubbles into the roof for our heads.

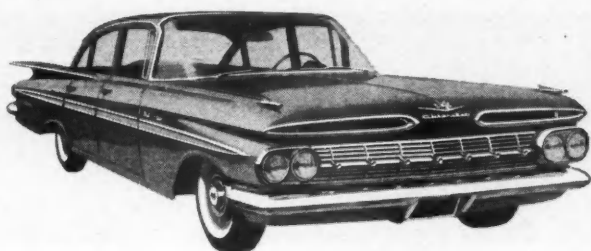
After we've had a chance to closely analyze the new cars and make our final tabulation of results, we intend to let Detroit hear you. After all, YOU are the people who buy the cars, so why not get what YOU want?



IN THE PHOTO ABOVE, you see Associate Editor Wayne Thoms presenting the MOTOR TREND trophy for the Best Engineered Car at the Oklahoma City Nationals. Accepting the trophy is Art Chrisman, flanked by brother Lloyd. The Chrisman brothers have a 10-year record of building successful dragsters. Their current car was a strong contender for "top eliminator" (fastest of the long Labor Day weekend meet), but Art got off to a bad start and was beaten by a fraction of a second. Chrisman's best time at Oklahoma City was 147.29 mph (153 elsewhere), with an elapsed time for the quarter-mile of 10.05 seconds.

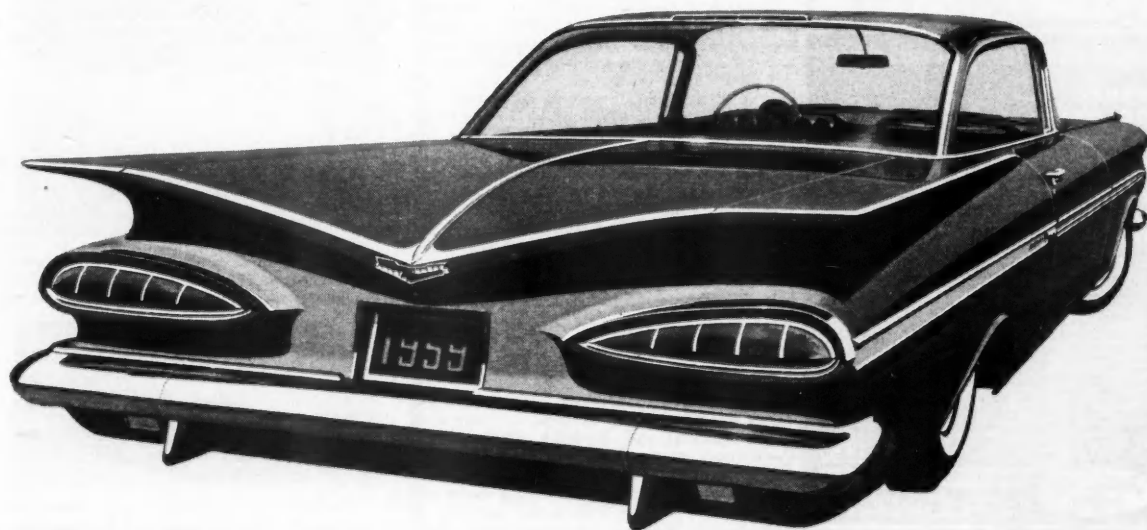
The award to the Chrismans was not given for one single reason, but for a combination of many factors, all of which contribute to the building of a safe, fast car that handles well and gives a minimum of trouble.

Wayne Thoms



The Bel Air 4-Door Sedan with a roomier Body by Fisher.

NOTHING'S NEW LIKE CHEVY'S NEW!



Impala Sport Coupe—new down to its tougher Tyrez cord tires.

From the winging shape of its saucy rear deck to the simple elegance of its grille, this car shows you it's new in a decidedly different way. You get more of what you want—more spacious interiors, vast new visibility areas, bigger brakes for safer stops, a longer lasting finish, a new Hi-Thrift 6, new handling and riding ease. And you get all the virtues of economy and practicality you've come to expect in a Chevy.

One look at this '59 Chevrolet tells you here's a car with a whole new slant on driving. You see the transformation in its low-set headlights, the overhead curve of its windshield, the sheen of its longer lasting Magic-Mirror acrylic finish.

But to discover all that's fresh and fine you must relax in Chevy's wider seats, feel the loungelike comfort of its new interior, experience the hushed tranquillity of its ride.

You'll also find bigger brakes, a new 6 that gets up to 10 percent more

miles a gallon and vim-packed V8's.

Your Chevrolet dealer's waiting now to show you the car that's shaped to the new American taste. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



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THE PRICE OF LEMONS

Dear Sir:

Those unfortunate car owners who at some time in their lives have purchased what is known as a "lemon" will be interested in a decision rendered recently by Judge Thomas C. Schettino in Superior Court of New Jersey, Chancery Division, Monmouth County.

The case in question involved a new station wagon which from the first day of its purchase had a number of defects including rattles in the body, a bubble in the glass of a window, irregular indentations in the fenders and both sides of the roof, and various paint defects. The purchaser duly reported these faults, actually factory-built defects, well within the 90-day guarantee period, and the dealer attempted to remedy them but without success. The warranty called for making good on any mechanical defects, and this the buyer concluded was not done in spite of the efforts of the dealer.

Since the difficulties were not adjusted to the customer's satisfaction, he brought suit claiming that he should have had a new car in perfect condition in view of the warranty's claim that the dealer was obligated to making "good . . . the defective part or parts referred to within the warranty period without charge for replacement and labor."

The judge agreed and ordered the dealer to return the full purchase price to the purchaser.

R. Blagden

East Hampton, Conn.

PURE ECONOMICS

Dear Sir:

I purchased an imported car this spring—a VW. Why? Pure economics. I hate fads, snobbishness, and anything which smacks too much of novelty. But nearly \$500 savings a year in just operation and maintenance is a big argument. At the present rate, I can figure another \$500 a year saved in depreciation. That's a lot of money. I drive around 22,000 miles a year in my work and keep very accurate records of car expense.

The car I unloaded in favor of the bug was a '56 model Detroit bomb. What have I lost? Horsepower? Had much too much of that. Speed? Couldn't use it anyhow without endangering life or picking up a fine. Weight? Over two tons to transport just a 165-pound man most of the time? Ridiculous! Comfort? The bug provides all the comfort I want. Styling? I was the loser there, but after looking over some of the stupid '58 jukeboxes, I wonder.

Father V. J. Schaefer

Kasson, Minn.

THE OTHER SIDE OF THE FENCE

Dear Sir:

A few weeks ago I had the luck to ride in a '58 Super 88 Olds. I was surprised at the acceleration and easy handling on the small British roads. But most of all I was very impressed with the 18 mpg our friend got as an average over 5000 miles. This compares favorably with another friend who gets only 19 mpg from his Rover 90, which

has about 100 horsepower and about a 150-cubic-inch engine, compared with the Olds' 300 horsepower and 371-cubic inch engine. Another striking thing is the comfort and suspension in comparison with our cars.

So unless the American buys a very small (60-cubic-inch) car, for economy alone, I don't see why he buys a British car when he has cars just as cheap and built for American roads in America.

Alastair Macmillan

Dunbarton, Scotland

ATTENTION, BIRD WATCHERS!

Dear Sir:

Here are some photos for your bird watchers. They show a face-lifting job on



my 1957 T-Bird which gives it that new four-eyed look. The lights are from a 1958 Buick, and the customizing was done locally.



The Bird is blown with McCulloch's big charger, has straight pipes, a 3.56 ring gear and pinion and full power equipment.
Hadley M. Wilson, M.D. Boone, N.C.

A MATTER OF CHOOSING WISELY

Dear Sir:

It seems when you mention "V8" to the average motorist, he automatically thinks of a 300- to 400-horsepower gas-guzzling monster.

Let us keep in mind that there are still a few "reasonable" V8s in existence. To name a few—the 283-inch Chevrolet, the 292-inch Ford, the 318-inch Plymouth and the Studebaker V8s. All of these engines would deliver good performance and good economy.

Detroit still makes reasonable cars, and if you choose wisely you won't have to moan about gas bills and 300-plus horsepower and gadgets that don't work.

Tony Pate

Duluth, Minn.

GRIPES! GRIPES! GRIPES!

Dear Sirs:

I am planning on becoming an automobile

stylist in the near future. I have noted much discontent among our car-buying public.

I wish every one of your readers—including the "they-don't-build-them-the-way-they-used-to" group—would list their gripes and send them to me. I will take every gripe or argument and try to refute it, or show the people our cars are the best in the world and that they have little basis for these gripes.

Send your gripes to:
Allen Davidson, Rt. 2, Box 141, Elma, Wash.

A PLEA FOR ROLL BARS

Dear Sirs:

Why, if Grand Prix racing is the finest type of motor sport, must it also be the most deadly type of racing? Why aren't their fine drivers protected by the one thing no race car should be without—a roll bar?

All NASCAR stock cars must have roll bars, starting Jan. 1, 1959; every USAC national championship car, sprint car, midget, sportscar and stock car must also be equipped with a roll bar. All cars racing in SCCA-sanctioned races must have this safety device. There is not a dirt track in our country that does not demand the use of a roll bar.

Motor racing is the world's finest sport. The Grand Prix is the finest form of this sport. But Grand Prix racing is doomed if the FIA doesn't come to its senses and start using the safety roll bar to protect these fine drivers.

Raymond Charles Beck II Dover, Ohio

FRIVOLOUS WASTE

Dear Editors:

After reading about "Planned Obsolescence" in the "Spotlight on Detroit" section of your September issue, I would like to make the following comments:

I believe that the emphasis of our economy has been placed on excess fashion and high style. Since neither of these has any lasting merit or utility, the materials and man-hours spent pursuing these goals to extremes are wasted for the sake of personal pride and frivolity. In my opinion this sort of economy is not a sound, durable basis for our national benefit or prestige.

Think of all the accomplishments Americans could point to if their labor and material would be poured into sound utilitarian goods instead of thrown "down the drain" of style obsolescence!
Lee R. Ringel Temperance, Mich.

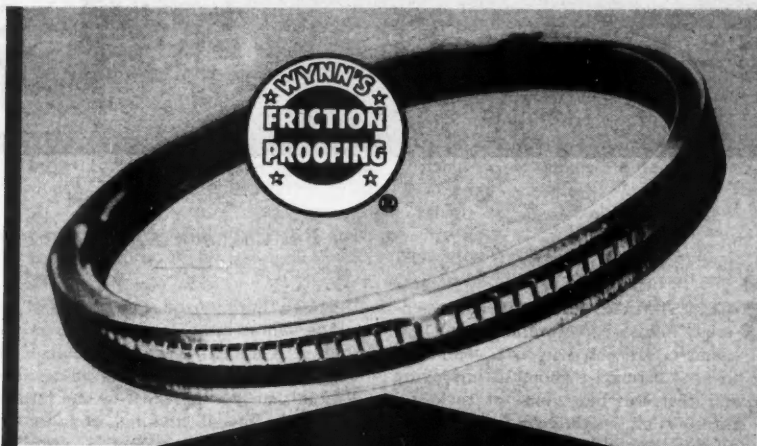
THE PRICE IS NOT RIGHT!

Dear Walt:

As Bob Gottlieb may have suspected, his comments concerning Lincoln Continentals in the September MOTOR TREND have had a reaction upon many Continental owners. The great debate as to whether Continentals are so-called classics, and to what degree, still occupies those with nothing more interesting to do, while in contrast the owners become more enthusiastic and devoted to the cars in question.

As to prices mentioned by Bob—the price obtained for a Lincoln Continental depends upon many factors. Possibly the most important is the time element. I have friends who are continually in the market for Lincoln Continentals in showroom condition with powerplants to match. Such cars are steadily bringing between \$2000 and \$2500—and not an absolute top of \$1500 as Bob states. Elliston H. Bell, Jr. Boston, Mass.
Founder, Lincoln Continental Owners Club

A check of the For Sale ads in Sell 'N' Swap, enthusiasts' publications and the daily newspapers would indicate that Bob is probably correct.—Ed.



168,635 miles...and just like NEW!

This is an actual photograph of a set of rings taken from a 1955 Mercury owned by Mr. Doyle Keeling of Houston, Texas.

Mr. Keeling, who has used Wynn's Friction Proofing in his car since the day he bought it, recently had his engine torn down and overhauled. He was so impressed with the condition of the rings after 168,635 miles, that he sent them to Wynn Oil Company.

Notice the fine surface polish on the rings... the like-new brightness and the sharp, clean edges. Here is 168,635 miles of proof that Wynn's Friction Proofing doesn't merely coat metal with a thin film, but actually *impregnates metal*... proof that this in-the-metal protection means less repair costs, greater performance, a longer life for your car's engine.

Wynn's Friction Proofing for Auto Engine is unconditionally guaranteed and carries the Car Life Seal of Merit awarded for *Superiority, Efficiency and Performance*. Add a pint to your car's crankcase with each oil change or every 1000 miles.



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*Friction Proofing is Wynn's Trade Mark for its exclusive metal conditioner which reduces friction between moving metals by chemically smoothing and sealing the surfaces. Manufactured by Wynn Oil Company, 1151 West Fifth Street, Azusa, California, U.S.A.



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SPOTLIGHT ON

DETROIT



by Bill Callahan Detroit Editor

SALES ESTIMATES FOR 1959 range generally from 5.5 to 6 million cars. These estimates are based upon a confidence that the national economy is improving and that the new lines of cars will further stimulate the economic upswing. Of this estimated number it is expected that about 400,000 will go to imports, which brings us to the big question:

"DO PEOPLE WANT SMALLER CARS?"

Studebaker's entry into this field provides additional test of this sentiment. American Motors in 1958 climbed from 12th to seventh in sales with its 108-

enough European flavor to appeal to those whose likes lean in that direction. There is ample room for six adults with approximately four inches more legroom than was provided by the former Scotsman model. Interiors are tastefully done and instrumentation is complete, attractive and well placed. Visibility front and rear is good. The driveline hump, despite the fact that a straight driveline is used, is not excessive. Trunk space is about the same as in the Scotsman, with greater width and shorter depth front to rear.

HANDLING AND PERFORMANCE are good.

In the engine department there will be an option of six- and eight-cylinder engines, and either synchromesh or automatic transmissions are available. Use of long semi-elliptic leaf springs in the rear and coils in the front provides good riding qualities even over the rough spots on Route 1, at Studebaker Proving Grounds. Steering is exceptionally light but positive. Use of 15-inch wheels permits larger drums and more effective braking. In a straight stick job powered by a V8 engine we got zero to 60 in just about nine seconds. The six-cylinder L-head engine displaces 170 cubic inches, has an 8.3 to 1 compression ratio, and delivers 90 horsepower. The 259-cubic-inch V8 with 8.8 to 1 compression is rated at 180 hp; four-barrel carburetor and dual exhausts boost output to 195 hp.

IF SMALL CAR DEMAND is real in depth, we would expect this little car to make a niche for itself in the 1959 market. It will be offered in seven solid exterior colors and a two-tone combination. Exterior chrome is limited, but ample. Production economies include the use of the same bumper front and rear, and the entire front section of the car is a single stamping to which hood and fenders are added.

PRICE IS STILL A PROBLEM, but Harold Churchill, Studebaker-Packard president, estimates base price at around \$2000, with automatic transmission and a few other goodies costing a little more. If the car wins acceptance we would expect it to complement, rather than cut into, American Motors sales. If the acceptance of both lines proves healthy

we could see a little erasure exercise on Detroit drawingboards.

IN KEEPING WITH THE DETROIT TREND

Cadillac will be lower, longer, have more glass, and offer additional body styles for 1959. Major styling changes that run through the entire GM line are in effect in abundance on the new Cadillac. The entire front end has been restyled, and while distinctive fins have been retained, they are presented in a new, thin version. With such major changes front and rear—thinner tops, double curved and deeper indented windshields and rear windows—Cadillac has a completely new car for 1959.

THE TOTAL AVAILABLE BODY STYLES

are 11, with two new ones, the Eldorado Biarritz and the Eldorado Seville, on the standard 130-inch wheelbase. These super-styled sports versions offer a 345-hp engine, Hydra-Matic transmission, and air suspension as standard equipment. Series 62 bodies include a sedan, a four-window sedan coupe, convertible, and a de Ville coupe and sedan, all available with the standard 325-hp engine, or optionally with the 345-hp. An eight-passenger sedan and an eight-passenger limousine on a 150-inch wheelbase, coupled with 106 possible interior arrangements, complete Cadillac's effort to give the customer maximum latitude in selecting a car customized by the factory to his individual preference.

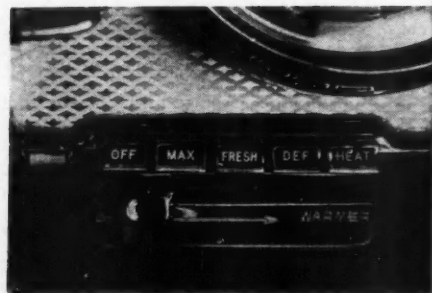


LARK—STUDEBAKER'S NEW SMALL CAR

inch-wheelbase Rambler and Rebel series, the 100-inch-wheelbase American series and the 117-inch Ambassador. Only 13,000 of these represented the larger Ambassador, 31,000 were Americans and 118,000 Ramblers and Rebels.

STUDEBAKER'S NEW CAR is a cute trick that has been erroneously described as "boxy." It is based on a 108½-inch wheelbase with an overall length of 175 inches. Body choices will include two-door and four-door sedans, a two-door hardtop and a station wagon. The wagons will have a wheelbase of 113 inches. Although only 69 inches wide overall, compared with Cadillac's 83 inches, the small Studebaker's hiproom of 59 inches is only five less than that of the Cadillac.

STYLEWISE, LINES ARE GOOD with well-balanced appearance that has just



CHRYSLER brings pushbutton control to heating and air-conditioning unit on new models as optional accessory.

UNDER THE HOOD, the reliable 390-cubic-inch, 325-hp ohv V8 remains pretty much the same as last year. Optional modifications in carburetion, cam and manifold increase its horsepower to 345 without sacrifice of smoothness so characteristic of this powerplant.

A NEW SHOCK ABSORBER, standard on all new Cadillacs, prevents the fluid from air frothing by the use of oil-filled plastic sleeves around the hydraulic reservoir and piston. The action of the piston remains constant against the oil and assures top efficiency of the shocks under the severe conditions of all road surface situations. Ordinary hydraulic shock absorbers whip minute amounts of air into the fluid, producing a frothy fluid that decreases the efficiency.

FOR THOSE LONG ROAD TRIPS, Cadillac offers an option called Auto Pilot (made by Perfect Circle). A dial setting selects a cruising speed which locks

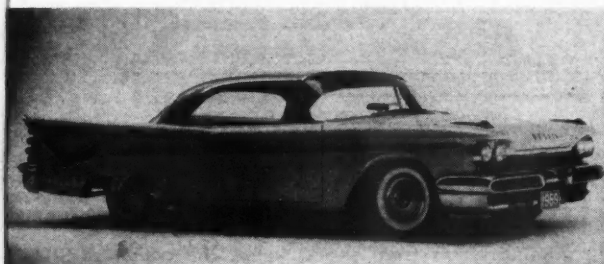
with the carburetor throttle. Then it is possible to maintain any pre-set road speed, uphill or down, without using the accelerator. A touch of the brake pedal instantly unlocks it.

DE SOTO'S MODEL LINE for 1959 has been tastefully restyled enough to distinguish it from last year's. Front grille and rear deck have been changed slightly and the fins have been canted further outboard. Thinner rooflines and glass creeping further into the top, front and rear, are in keeping with the general style trend throughout the industry. Using the same basic chassis and suspension as the rest of the Chrysler line, DeSoto offers shorter front torsion bars for better ride, cam-mounted front suspension to facilitate wheel alignment adjustment, and improved optional air leveling.

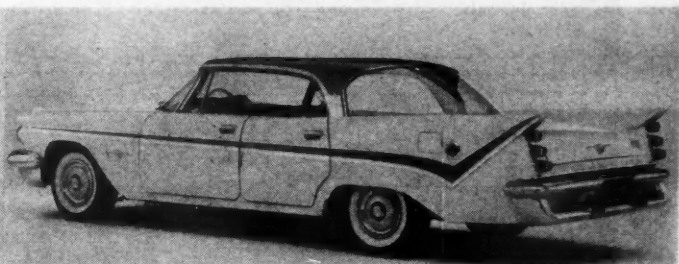
TWO OF THE BASIC CHASSIS, the 122-inch- and the 126-inch wheelbase, are

used for all body styles, which include two-door hardtops, four-door hardtops, convertibles and wagons. Firesweep, Firedome, Fireflite, and Adventurer series combine to make a total of 18 body models available. All of the interior options of the Chrysler line—from swivel seats to electronic rear-view mirrors—are offered along with a wide choice of fabrics and colors.

FOR THE FIRST TIME the 383-cubic-inch, 350-hp engine, formerly available only on the Adventurer, will be offered as an option on all series. Firesweep models carry a 361-cubic-inch, 290-hp engine; the Firedome, a 383-cubic-inch, 305-hp; and the Fireflite, a 383-cubic-inch, 325-hp engine. The Adventurer owes its horsepower to two four-barrel carburetors, special cam, dual ignition and exhaust, and special valve springs and dampers. Wedge-shaped combustion chambers and high compression ratios are new this year and enable



DE SOTO SPORTSMAN TWO-DOOR HARDTOP



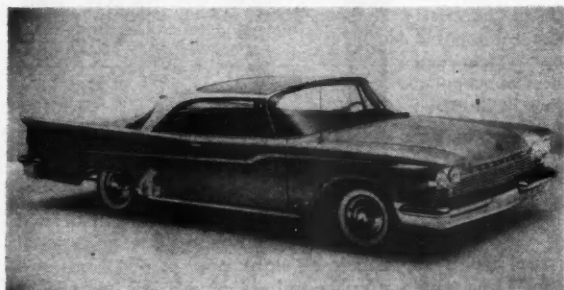
DE SOTO FIREFLITE FOUR-DOOR HARDTOP



IMPERIAL LE BARON WITHOUT OPTIONAL SPARE



IMPERIAL LE BARON FOUR-DOOR SEDAN



CHRYSLER WINDSOR TWO-DOOR HARDTOP



CHRYSLER SARATOGA FOUR-DOOR SEDAN

SPOTLIGHT ON DETROIT

continued

livelier engines, economy through better use of the fuel, and higher rear axle ratios to take better advantage of more engine power. Premium fuels are required for best performance.

CHRYSLER AND IMPERIAL for 1959 have styling changes devoted mainly to smoothing existing lines and relocating chrome trim. A new grille, bumpers, tail lights, thinner rooflines and more glass area are part of the smoothing operation, but overall the lines are much the same as last year. Inside and under-

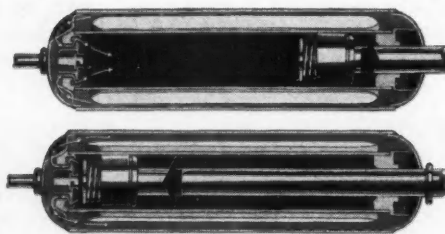
neath there are many changes that are definitely new—changes that provide more comfort, better visibility, greater selection of fabrics and colors, and mechanically, more horsepower and an improved ride.

413-cubic-inch engine, but in different stages of tune. A four-barrel carburetor and dual exhaust modification produces 325 hp, and is standard for the New Yorker, but for the 300-E, two four-barrels, special cam, special valve springs and dampers, dual ignition and exhaust and a special air cleaner bring the horsepower up to 380. A slightly de-tuned four-barrel carburetor version of this engine, producing 350 hp, powers the Imperial. All engines have 10 to 1 compression ratios and require premium fuels.

leather. About two-thirds of the forward part of the roof is stainless steel with a brushed finish. It joins and blends into the rear of the top, which is finished in your choice of body-matching or contrasting paint or leather, producing a distinguished custom look.

INTERIORS RUN THE GAMUT of fine fabrics, leathers and plastics, with tasteful applications of chrome in just the right places. The ladies will be hard pressed to decide among the wide choice of

continued on page 14



CADILLAC FOUR-DOOR SEDAN de Ville (upper left), Fleetwood 60 Special (lower left) both use company's plastic sleeve Freon-12 shock absorber. Use of oil in sleeve, which contracts and expands, eliminates air from shock, keeps the action of the absorber piston constant against the oil. Diagram above, showing operating principle, illustrates piston in opened and closed positions.

neath there are many changes that are definitely new—changes that provide more comfort, better visibility, greater selection of fabrics and colors, and mechanically, more horsepower and an improved ride.

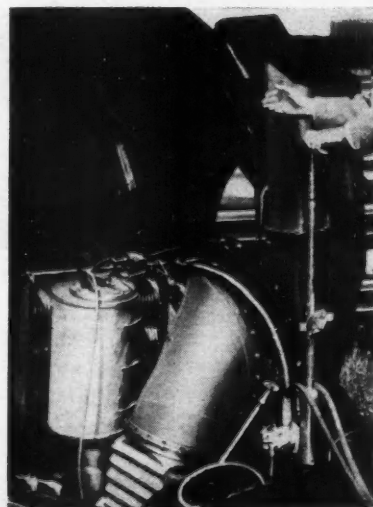
SHORTER FRONT TORSION BARS for a better handling ride and cam-mounted front suspension to facilitate wheel alignment, plus better valving and air condensing for air bag leveling, are among the major chassis changes. Wedge-shaped combustion chambers and increased compression ratios improve performance and slightly higher rear axle ratios take better advantage of the greater torque for better economy.

THE CHRYSLER WINDSOR SERIES on a 122-inch wheelbase will use the Golden Lion 383-cubic-inch engine with two-barrel carburetor, developing 305 hp. The same engine with four-barrel carburetor and 325 hp will be under the hoods of the Saratoga models. The New Yorker and the 300-E, on 126-inch wheelbase, will both be using a big

THE POPULAR TWO-DOOR HARDTOP is available for all Chrysler series, and the four-door hardtop on all but the 300-E, while the convertibles are offered for all but the 300-E.

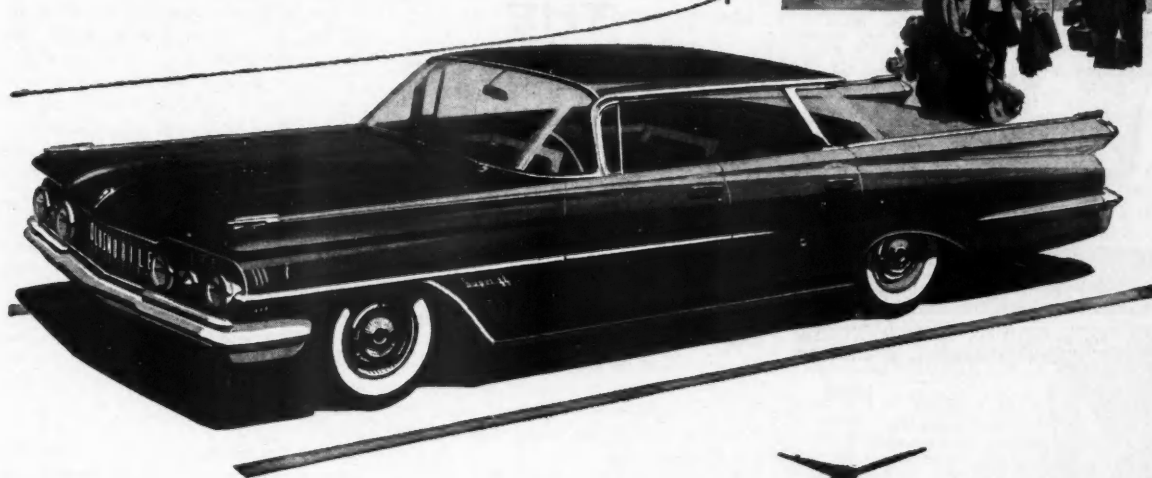
IMPERIAL MODELS WILL BE OFFERED in three series: the Imperial, Crown Imperial, the LeBaron, with a wide choice of interiors, swivel seats, electronic rear mirrors, automatic headlight dippers, and other options available throughout the Chrysler line, including the 300-E engine. All models are on 129-inch wheelbase and include in the Imperial: a two-door and four-door hardtop and something real startling—a four-door sedan with a stainless steel roof option. A two-door and four-door hardtop and a convertible, plus the stainless steel option for Crown Imperials, and LeBaron four-door hardtop and sedan with stainless roof option complete the body choices for Imperial.

THE OPTIONAL stainless steel top is an interesting piece of styling using stainless in combination with either paint or



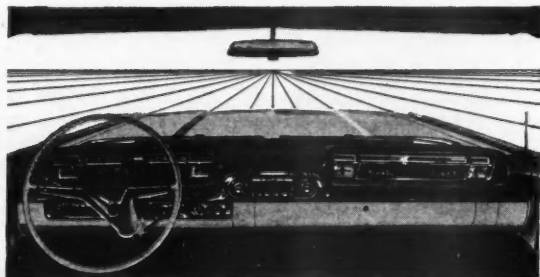
EXPERIMENTAL GAS TURBINE in a Ford has been under road test. Exhaust stack at right and combustion and fuel chambers at left are on top of the impeller housing below frame.

**START OF A NEW
STYLING CYCLE!**



...PACKED WITH NEW ROCKET PERFORMANCE!

**SO TOTALLY NEW...
SO TYPICALLY OLDS!**



Spacious interiors offer more room and comfort! Up to 64% more luggage space! New Vista-Panoramic Windshield sweeps into the roof! New Safety-Spectrum Speedometer and electric windshield wipers on every model of every Olds!

Oldsmobile for '59 heralds the start of a new styling cycle with the slim, trim "Linear Look"! New Rocket Engines deliver improved performance and *more economy* with Oldsmobile's exclusive new 2-stage automatic choke! Added window area gives you a horizon-wide sweep of vision. More passenger room gives you greater comfort *all around!* Olds brings you all-new, *longer-lasting* Air-Scoop Brakes (*on all four wheels*); smooth, level "Glide" Ride! Plus two new fun-loving models—the Holiday ScenicCoupe and the Holiday SportSedan. So come in for a test drive. Let the 1959 Oldsmobiles *speak for themselves* at your dealer's today!

Discover the many new Added Values of OLDSmobility for '59
at your local authorized

OLDSMOBILE
QUALITY DEALER'S

AMAZING PERFORMANCE
reported from new projected nose
spark plugs imported from



**LODGE
OF ENGLAND**

The first Lodge projected nose
plugs have just arrived in
America and our tests indicate
they are as terrific as the
British said. Test car #1 has
topped 10,000 miles and the
plugs look like new and are
still giving "new plug" mile-
age and power. Be among the
first to enjoy them in your
1955-59 Ford, Merc, Edsel or
Lincoln. (Available for other
cars soon). Ask for LODGE
No. CTNY, \$1.10 ea. If your
dealer can't supply, write:
AUBURN Spark Plug Co. Inc.
Auburn 7, N.Y.

National Distributors for LODGE Improved
Regular, Platinum and Racing Plugs.
DEALER-JOBBER INQUIRIES INVITED.

TWO-TONE NYLON SEAT COVERS
For that NEW LOOK in your car



**EASY TO
INSTALL**
**DURABLE,
WASHABLE**

Dresses up your car's in-
terior. Washable, gives
your upholstery long-
lasting beauty & protec-
tion. To install, simply
slip over seats. In navy,
blue, green, tan and white combinations.
\$2.98 for front split, or front or back solid. Set \$5.75
Add 25¢ postage or sent C.O.D.

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NICE CAR deserves a NEW Kozak ?

SPECIAL OFFER: One regular and one SUPER
Auto DRYWASH cloths — \$7 value for \$5.
Safely wiping and DRYwashing nice cars for 33
years. Save their cost dozens of times. Guaranteed.
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"Studebaker-Packard will produce a
highly individualized Packard in the
ultra-ultra luxury price class to keep the
Packard name alive. A very limited
number will be built."

FALSE—This notion was considered and
may still be, but it is more likely to be
stillborn with the ultra-Packard never be-
coming any more substantial than a gleam
in a PR man's eye.

"The company that made the custom
Chevy El Morocco intends to build a
new custom car using the Volvo Duett
chassis."

FALSE—Allender & Co. of Detroit is
not planning a customized car of any type
for the coming year. (The one referred to
in the rumor was featured in the July '57
issue of MOTOR TREND.—Ed.)

SPOTLIGHT ON DETROIT

continued from page 12

color combinations offered. Plenty of
style, horsepower, luxury and comfort
are in the Chrysler-Imperial package for
1959.

ALONG OTHER LINES, Chrysler admits
that it is hard at work on a small car
but has increased its holding in Simca

"Chrysler intends to make its own
electrical equipment for its '59 cars."
FALSE—This is a fairly persistent rumor
since Chrysler established its own electrical
equipment division in Indianapolis, Ind.
They intend to use AutoLite equipment
for '59, and possibly even beyond that.

"A special Ford series of cars will come
out later in the year, looking much like
the Thunderbird."

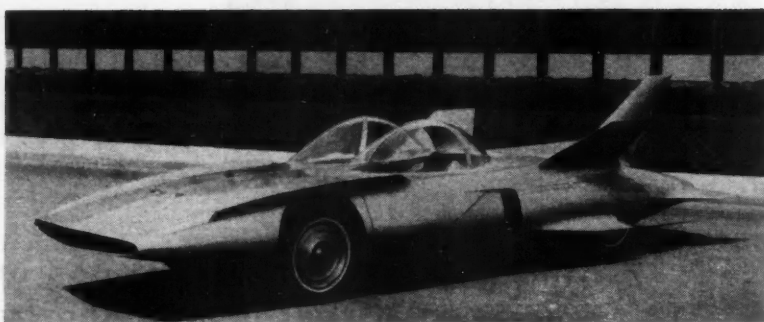
TRUE—At least in the respect that these
cars, to be announced later than the regular
series of Ford lines, will copy the roofline
of the four-passenger T-Bird. The series
may be named after one of the early Ford
futuristic "dream cars."

"A small Chevrolet has been undergoing
tests at the General Motors Proving
Grounds for several months."

FALSE—This is another persistent rumor,
but we have it on excellent authority that
any small car seen at the proving grounds
in Milford, Mich. was not a Chevrolet
product.

"Wilys has produced a lower, plusher,
softer-sprung station wagon bearing the
name of Maverick. Understand a few of
these are being driven around the
Detroit area."

TRUE—Present units are being offered in
about five metropolitan areas to test market
potential. No decision has been reached to
put model in production. Will not differ
greatly in appearance from present models.

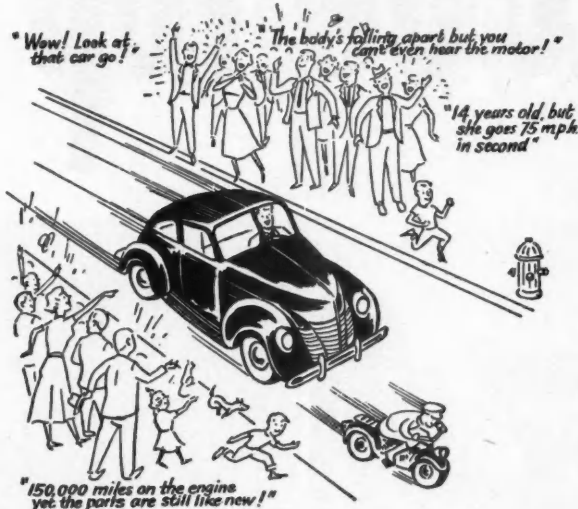


FIREBIRD III is latest version in GM's experimental series. Tools of the
space age—electronics, transistors, computers—are used to guide car auto-
matically if desired. Extra 10-hp engine powers accessories, frees 225-hp
gas turbine engine to drive rear wheels. Easy-entry gull-wing doors are
power operated, open forward. Car is 44.8 inches high at the top of the
bubbles, 57 inches high at tail. For more pictures and details, see page 70.

New Laboratory Triumph Shows How

A \$4⁹⁵ Magna-Power Saves You Up to \$200⁰⁰ ...or your Money Back!

(see #1 in box below, left)



Here's What Magna-Power Does for Your Engine:

1. Your Oil

Your oil will last longer! You can not only change less often but also get more miles per quart in between. See for yourself! Put samples of your oil in 2 open Pyrex baking cups and heat to 300°F in a GAS FIRED oven—one with the Magna-Power and one without. After 2 hours, shut it off and allow to cool for several hours. Start up the oven again and repeat the whole thing. Keep repeating until 45 or 50 hours of high temperature have been run. (High priced oils may need longer.) Examine the oils and put a drop of each on a white blotter for comparison. The spots below show the vast difference in oil breakdown.

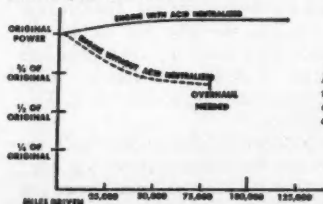


With—Magna-Power—Without

Oil treated with Magna-Power stays clean—leaves only faint spot shown at left. Spot at right shows usual filth and contamination. This is the same thing that happens in your engine. The oil warms up in contact with hot blow-by gases—the moisture condenses in the oil, makes acids and breaks down even the best oils.

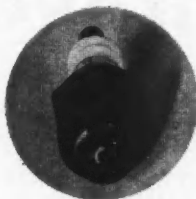
2. Engine Power

Engines maintain full power (or actually increase)—for amazingly long mileages. Many have 180,000 to 200,000 miles and more—WITHOUT ANY MAJOR OVERHAUL.



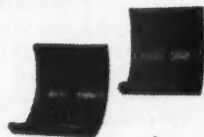
3. Spark Plugs

Actual experience shows that your spark plugs should last 2 or 3 times as long as now when they are not fouled by the filth and goo that normally collects in your oil—dissolved in it, so the filter cannot remove it.



The plug shown is 1 of 8 with 61,810 miles on them and still showing nearly new efficiency. One engine has gone 188,438 miles so far on 2 sets of plugs—it is still in top condition!

4. Engine Wear



Measurements show reductions with Magna-Power of 3 to 1 or better under the same conditions.

Johns Research Labs, Department 11M, Middlesex, N.J.

Does YOUR car give you the pep and power it had when new?

—if not you need a Magna-Power! With a Magna-Power you can save 80% of your engine repair bills and have a "new" car longer.

—it takes only one minute to install—at a cost of less than \$.005 per mile (five-thousandths of a cent!)

—a \$4.95 investment in a Magna-Power will return itself IN FULL every time you change your oil—and keep on doing so for years, saving you hundreds of dollars in formerly unnecessary oil changes, engine repairs, etc.

As one Magna-Power fan wrote: "There is no excuse whatever for a man to change oil every 2000 miles if he knows there is such a thing as a Magna-Power antacid neutralizing drain plug." And, of course, that fan's 13-year-old Chevy is his pride and joy—and is never in the repair shop—except for minor tune-ups, lube jobs, etc., then presto! On one oil change the entire \$4.95 saved—and his engine protected against acid corrosion—runs like a clock—quiet as a watch—"powerful as a B52"—a car with an engine that will not let you down—that actually increases in power, pep, speed and performance the older it gets. More automotive engineers, oil chemists and mechanical engineers have installed Magna-Powers on their engines than any other proportionate group of our population. And thousands of Magna-Powers have been bought by critical people in the past 9 years—people who save hundreds of thousands yearly—and, more important, get for themselves increased trade-in allowances amounting to hundreds of dollars for turning in mechanically perfect cars.

What Is Magna-Power?

Magna-Power is the new direct way to kill acid. Acid is the real cause of engine wear. The oil companies are spending millions to add acid neutralizers to their oils but these are not permanent.

Where Does the Acid Come from?

Gasoline has sulphur in it. When sulphur burns it makes sulphuric acid right inside your engine. Sulphuric acid eats metal. It destroys detergents and spawns more acid. Little by little the engine is eaten away. Acid is one of nature's methods of reducing metals to their original primitive state.

How to Neutralize This Acid?

The easiest and surest way is to use a solid chemical neutralizer attached to your oil pan drain plug. The Magna-Power is a drain plug with a rod of special alkaline metal alloy. Acids much prefer this naturally alkaline alloy to the other metals in the engine; but in eating it these corrosive acids are destroyed. Yet there is enough alloy to last 100,000 miles.

Get a Magna-Power Today—Not a New Engine Tomorrow

30-Day Free Trial—Send No Money

Fill out the coupon and mail it to us today! Try the Magna-Power for 30 days at our expense—we know from our thousands of satisfied users that you will find it saves you up to \$200 in the first year. Order from your own country! No duty—no red tape! Send order to 190 Brookside, Toronto 9, Ont.—Sinaloa 215, Mexico City—Magnalloy, Chutsey, Surrey, England.

JOHNS RESEARCH LABS., Dept. 11M Middlesex, N. J.

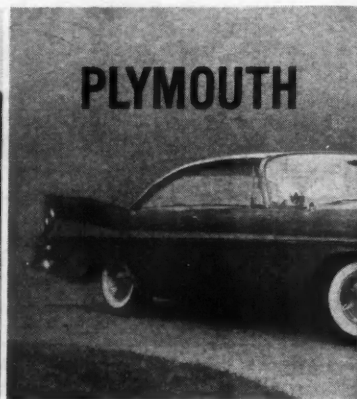
My car is a _____ (make) _____ (year)
Send me a Magna-Power for my car on your 30-day FREE TRIAL. If I like Magna-Power, I will promptly send \$4.95 (plus 25c postage and handling). Otherwise I will return Magna-Power and owe you nothing! SAVE—send \$4.95 with order and we pay postage—handling—money back guarantee.
SAVE—\$1.00 on 2nd, get two for \$8.95.

NAME _____

ADDRESS _____

CITY, ZONE, STATE _____

Who'll be Top



We know—we drove 'em!

by Charles Nerpel Technical Editor

THE LEADERS IN NEW CAR SALES for 1958—Chevrolet, Ford, and Plymouth—will again be battling to stay on top of the consumers' preference for 1959. Because these three enjoy the most sales and are within the same price class, they are being reviewed comparatively by MOTOR TREND to give the potential buyer an idea of what the "Big Three" are offering. Stylists and engineers have dug deep to catch the eye of the shopper, offer new features to the "one make" buyer, and entice customers away from other lines.

Prior to announcement dates of the new cars, Detroit is a madhouse of prototype deadlines, proving ground tests, and show date models in preparation. Cars are available for test rides by writers of the motoring press, and at least one of each body style is assembled for the thousands of photographs that will be taken to fill advertising brochures and publicity handouts necessary to launch the new models. The construction of these cars is a test for new body dies and assembly line procedures that will be encountered in mass production. They are virtually hand assembled, but are basically the same as those that will soon be pouring off the assembly lines.

Production and quality control are geared toward insuring the purchaser a product as close to the hand-assembled test cars as is possible under a mass production system. True, these cars are in top condition, but they are not "one-of-a-kind" specials put together to impress technical writers. This is one of

the reasons we avoided timed acceleration and speed tests. Many of the chassis and engines have been on the streets and roads throughout the country, disguised from the public eye with a 1958 body, but once the manufacturer turns the keys and the proving grounds over to automotive reporters, and exposes his engineers to the prying questions about the new product, there are few secrets he can keep.

Driving different cars over similar courses within a short period of time is the best way to judge the variance between them. It takes the personal opinion, or getting used to a piece of equipment, out of the driving impressions and puts it on a real comparative basis. Proving grounds in the Detroit area are so close to each other that it is possible to test drive several different makes of cars a day. Constant-radius curves, straight-aways, and handling courses are so similar that only by the surroundings can one tell he is on a different test site. Each manufacturer believes that his product is the best, but unlike the automotive journalist, he cannot drive his competitors' test cars—at least before public introduction. Best on the drawing board and best behind the wheel are two widely separated things. That is why they use proving grounds.

Based on these test methods, MOTOR TREND has made the following selections. To figure out which one will be "top dog," assign your own values to each of the features, total them, and you have it.

Doq in '59?



Most changed body style	Chevrolet
Best attempt at fuel economy	Ford
Best riding suspension	Plymouth
Best air load leveling	all about equal
Best handling suspension	Plymouth
Best steering (mechanical)	Ford
Best steering (power)	Ford
Best brakes	Chevrolet
Best interiors (standard model)	Chevrolet
Best interiors (deluxe model)	all about equal
Most engine options	Chevrolet
Newest mechanical feature	Ford's two-speed transmission
Most novel accessory	Plymouth's electronic mirror
Most quiet ride (mechanical noise)	all about equal
Most quiet ride (wind noise)	Chevrolet
Most body options	Plymouth
Heaviest frame	Ford
Best front suspension	Plymouth
Best rear suspension	Chevrolet
Most chrome (deluxe models)	all about equal



PLYMOUTH

For
'59

... offers adjustable front suspension,
rear air leveling, a new engine,
swivel seats, and a self-tilting
rear view mirror.

STYLING REFINEMENTS did not produce any major body line changes in the 1959 Plymouth. The fins have a few degrees more outward slant and are capped with a chrome strip, and a more massive bumper gives the car a wider look. Increased front and rear glass areas with compound curves extending farther into the roof still retain most of the 1958 identifying lines. All of these changes are aimed at producing a more luxurious looking car while still maintaining cost levels with Ford and Chevrolet. Aluminum has started to make its way into auto bodies in the form of Plymouth's fabricated anodized grille. This should cut manufacturing and replacement costs considerably below the die cast grilles on Chevrolet and Ford.

Well divided horizontal stop and tail lights in a unit that can be replaced if damaged are good functional signaling devices. The Sport Fury decklid with dummy wheel cover is now available as an option for all models except wagons. True, it is a false wheel, but it seems to add something more functional than chrome to an otherwise wide bare expanse of rear deck. The front fenders have been extended to a double-barreled housing over the twin headlights, and while they do nothing to help wind resistance, the effect is pleasing in that it removes the eyeshade look that characterized last year's models. Substantial rear overhang and prominent fins certainly make Plymouth the longest looking car among the Big Three, but they have curved the lower line upward to prevent scraping on all but the steepest driveways.

IN THE FACE OF MAJOR CHANGES in Chevrolet, Plymouth's minor "luxury look" improvements are just part of their 1959 program. They have expanded their models to include 11 body styles, including two separate convertibles. Luxury is dominant throughout the line except for the basic Savoy, whose interiors are austere compared to the lowest priced Chevrolet and Ford. The deluxe models run the gamut of fine fabrics, acoustical headliners, and chrome strips. Because of its length, Plymouth has plenty of interior room and thinner rooflines have increased head clearance, an important factor in entering and leaving a low-slung car.

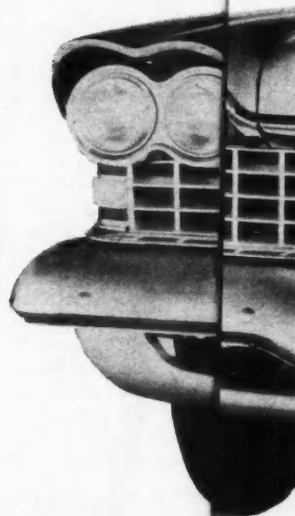
Dominating the 11 body choices are the "sports" models. More hardtops with all the goodies, including the new swivel seat option, lend themselves well to bright colors, inside and out. Extra-deep triple curved "control tower" windshields and rear windows are standard on all the hardtops. Again, penetration of more glass into the rear top puts a lot of heat on rear seat passengers, an undesirable feature common to this design.

Pushbutton transmission, heater, and radio controls on the dash make a very impressive array, but the claim of "control without taking your eyes from the road" is true only if some sort of touch system is devised. Driving one of these is like punching a typewriter.

THE CHASSIS AND SUSPENSION under the Plymouth are the same for the entire Chrysler line. The only major change is in the front suspension adjustment. A cam on the inner pivot of the upper control arm enables easy alignment by turning the bolt head on the end of the cam. Front torsion bars and rear leaf springs have undergone some spring rate changes but the same well-handling ride has been preserved. Air leveling on the rear is an option that is a must if heavy loads are carried, as a level chassis is most important to the best operation of front torsion bars.

Plymouth, like Ford, depends entirely on the rear leaf springs for rear axle registration but manages to do a better job in reducing body lean. Here is a graphic example of the influence of front suspension on rear springing. Torsion bars seem to contribute more than coil springs to reducing rear end lean with virtually the same rear suspension. The Plymouth ride is probably the best of the Big Three, with Chevrolet running a close second and Ford outclassing itself with that sickening lean in turns.

"What is this steering wheel connected to?" might be a logical question when driving the new Plymouth. Mechanical steering is getting so soft that it is often hard to tell the difference between it and a power unit. Ability to feel the front wheels pulling slightly to left or right due to road surface irregularities or camber is necessary to a relaxing drive, but Plymouth power steering is so light that constant attention is required to keep the car from wandering. True, a baby can steer it, but we recall sitting on our father's lap and steering a Model T fairly well at the tender age of 10.



APPARENTLY SATISFIED WITH THE CHASSIS, brakes and suspension of last year, Chrysler is concentrating on covering the entire market with a "car for very pocketbook." Plymouth starts in the so-called "low-priced three" but extends well into the luxury class occupied by Dodge, DeSoto and Chrysler. Feeling the need for "special" cars required by certain customers, Plymouth's body styles are geared to the "sports" models.

Interiors, with the exception of the standard Savoy, are what might be termed lavish. Metallics interwoven into fabrics blend with plastic upholstering materials, and colors are brighter and of wider choice. Swivel seats, talked about and shown on "dream cars" for years, are now a reality with their introduction as standard equipment on the Sport Fury. The seats revolve on nylon bearings and lock into driving position. A hand-operated latch on the outboard side of the seat allows body movement to swing it outward. There are no advantages when alighting from the car in close-quarter parking, but they are wonderful when the door can be opened fully. The ladies should like this one.

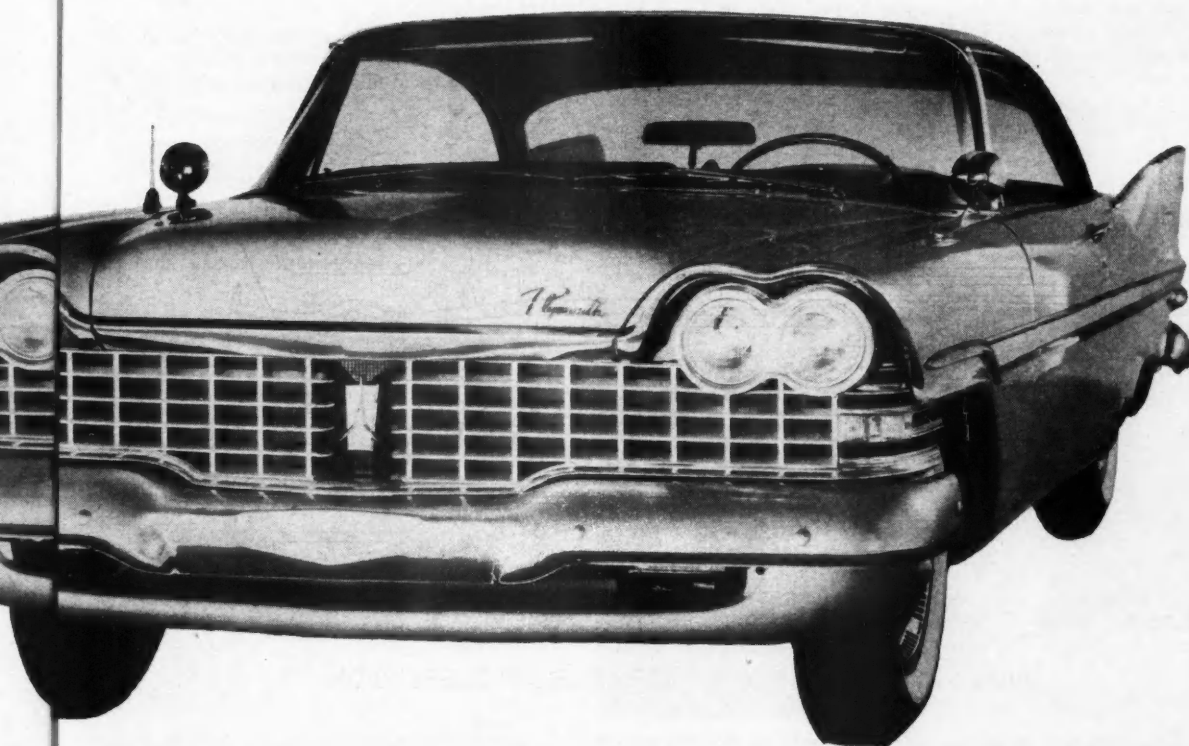
UNDER THE HOOD THE V8 ENGINES pose the same problems as with Chevrolet and Ford—it's crowded. To make things worse, Plymouth's V-type engines have a low plug location, plus little metal shields part way around them, to protect against manifold heat. The L-head Six, with slight improvements, has plenty of room but is available only for the Savoy and Belvedere models. Changes in manifolding for better breathing and quicker warm-up, and improved bearings and oil pump pressures are designed to create longer engine life. This 230-cubic-inch

engine with 8 to 1 compression is a good performer with manual transmissions, but bogs down a little with the PowerFlite option.

Wedge-shaped combustion chambers for 1959 V8 Plymouths may be the answer to the "rumble" that has plagued late-model high compression engines. Apparently, octane rating of fuel has little to do with this phenomenon, but combustion chamber shape has quite an effect on it. The 361-inch Golden Commando engine, available as an option on all V8 models, has four-barrel carburetion, dual exhaust, dual breaker points, heavy-duty valve springs and dampers, special camshaft and 10 to 1 compression ratio. The Fury V-800, standard on Savoy, Belvedere and Fury models, has a two-barrel carburetor as standard, but the Sport Fury carries as standard a four-barrel carburetor, special cam and dual exhaust modification that is optional for the other models. With the power kit, this 318-cubic-inch engine at 9 to 1 compression, performs almost as well as the Golden Commando engine. We had a lot of fun with the improved acceleration provided by this package while driving a 1959 model, disguised with a '58 body, around the expressways and streets of Detroit.

Manual, PowerFlite, PowerFlite with overdrive, TorqueFlite, and TorqueFlite with overdrive—all with rear axle ratios to give best performance—are little changed from previous models. An economy 2.93 to 1 ratio is available at no extra charge for all TorqueFlite transmissions. Plymouth, like Ford and Chevrolet, is playing with valving on automatic transmissions to secure crisper shifts without the jerk unusually inherent in such shifting. If they cannot eliminate this, Plymouth engineers will revert to the regular valving employed in 1958.

continued



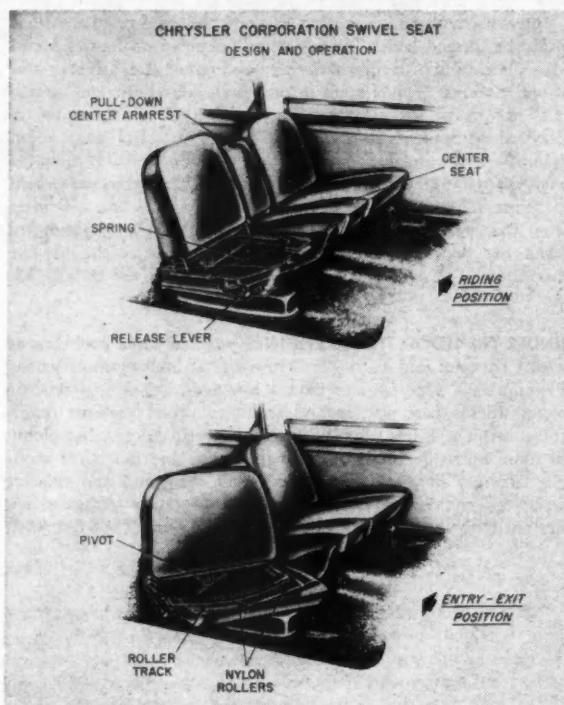
PLYMOUTH for '59 continued

DRIVING POSITION OF THE NEW PLYMOUTH is not too good. Without the advantage of an electric seat, a short driver is lost behind the wheel rim and blanked off from a generous portion of road visibility by the large, cowl-mounted rear-view mirror. Once the driver is sufficiently jacked up to see over the wheel, driving position is better, but there is a long reach, well below wheel rim level, to tap the right go buttons. Pushbutton driving is just something you have to get used to.

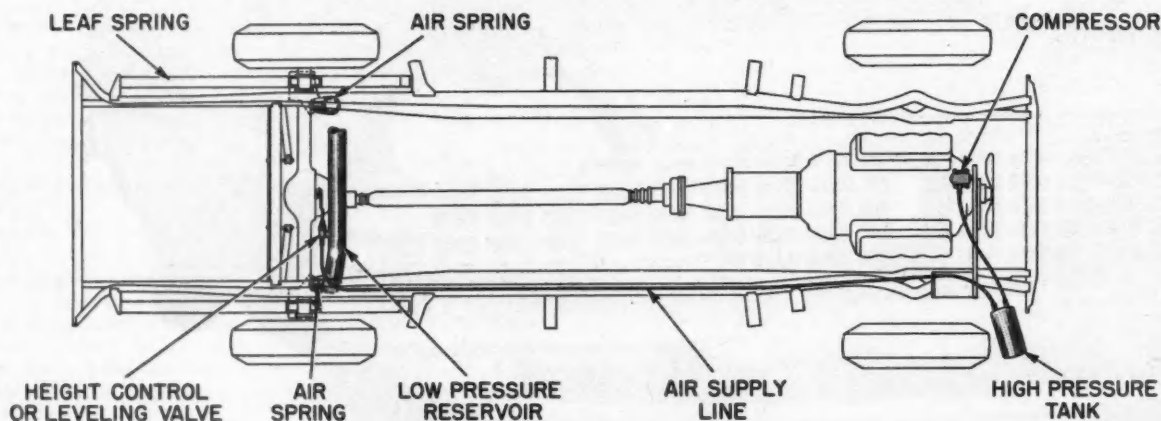
Elsewhere in the interior, seating is comfortable and leg- and headroom are adequate. Ventilation is good and wind noise is at a very low level, about like Chevrolet, at cruising speeds. Fender mirrors, unless properly adjusted, are just ornaments, but Plymouth has a fine optional accessory side mirror that is a joy to use. A small "joy stick" control on the dash allows the mirror to be moved at any angle, easily and accurately. Another mirror option replaces the regular rear-view mirror. Called "Mirror-Matic," it is electronically controlled to tilt slightly when bright lights of a following car come into view. It has the same area as the regular mirror but is thicker. More electronics are employed in Plymouth's automatic headlight dimmer. Using a cell of high red sensitivity and a control dial, headlights can be made to dim not only from approaching vehicles, but react to the tail lights of the car being overtaken.

An exterior "super enamel" with a high gloss life of two years is claimed for the paint finishes on the entire Chrysler line. Chevrolet claims three years for their acrylic lacquer and Ford isn't saying anything.

Automobiles with the trim and interior appointments as overwhelming as the 1959 Plymouth require rigid quality control to maintain that hand-fitted luxury appearance so emphasized in the new models. If not properly finished that "well worn" look could change to shabbiness in a very short time. We hope they can maintain the quality they intend for their luxurious cars.



SWIVEL SEAT has a manual release and pivots on nylon bearings. Pull-down armrest provides storage space when up and seating for a third passenger when down.



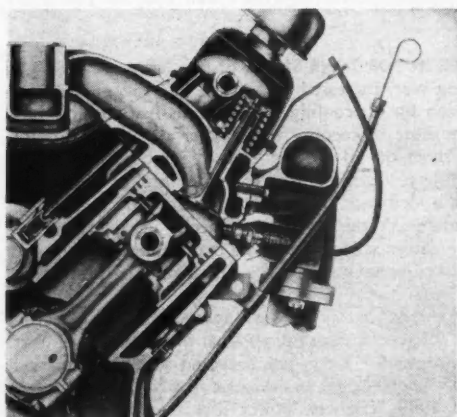
SCHEMATIC VIEW OF CHRYSLER REAR AIR SUSPENSION



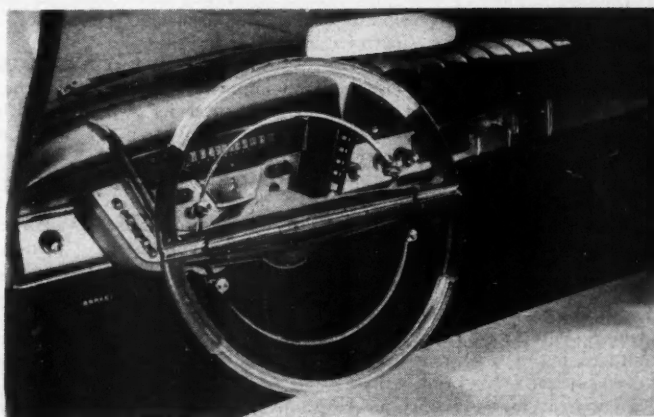
SPORT FURY 2-DOOR HARDTOP



SUBURBAN 4-DOOR STATION WAGON



WEDGE-SHAPED combustion chambers eliminate high-comp. rumble, increase economy.



FLATTENED TOP on steering wheel increases visibility, and push-button transmission control is mounted at left of instruments.



... offers a completely new body, improved rear suspension, increased braking area, nine engine variations, and a pickup to compete with Ford's Ranchero.

CHEVROLET, SALES LEADER FOR 1958, has veered from the Detroit pattern for the second time in as many years. For 1959 it is presenting a completely new body with chassis, suspension, and engine improvements. Unlike Ford, who made slight contour and trim changes, and Plymouth, who retained the same design, Chevrolet went whole hog on their style revision. In previous years, when fins became higher and longer, Chevrolet remained top seller with a rather conservative but pleasing rendition of a trend that threatened to grow into bomber-sized rudders. A new treatment, fins in a horizontal plane blended into the rear deck, has produced a distinctive and pleasing effect and is so versatile it can be used effectively on all body styles without losing its identity. Bumpers, grille, hood, windshields, backlights, stop and tail lights have changed to form a pleasing blend of ideas in style. Magic Mirror, the name GM has given to its new acrylic lacquer, offers a wide array of new colors for 1959.

THE HIGHLY SUCCESSFUL X-TYPE FRAME has been retained for the coming year with some minor modifications to accommodate extra suspension linkage and an extra crossmember in the rear to reduce frame twist. Chevrolet bodies are of such unit construction that they do not depend on frame support for rigidity as much as Ford or Plymouth, and consequently, they can increase body width without requiring a wider and heavier frame. Anticipating the possibility of increased demand for powerful engine packages, Chevrolet has added an anti-twist linkage to take the axle torque off the suspension units. A new lateral control bar reduces body sway and improves handling by keeping the rear axle in position to rotate near its own center on fast cornering or bumpy roads.

The idea behind these suspension changes is to isolate the duties of the various components, i.e., springs for springing, trailing arms for keeping axle in line, torque arm to absorb axle twist, and lateral stabilizer to control body sway and frame position over the rear suspension. This new linkage has improved handling and body sway greatly, but there seems to be a direct relationship between rear end behavior and front suspension. Despite the major changes in the rear, the '58 front end is retained. As a result, riding comfort, body dip and sway are improved, but must go quite a way to match that of Plymouth's torsion bar-leaf spring combination.

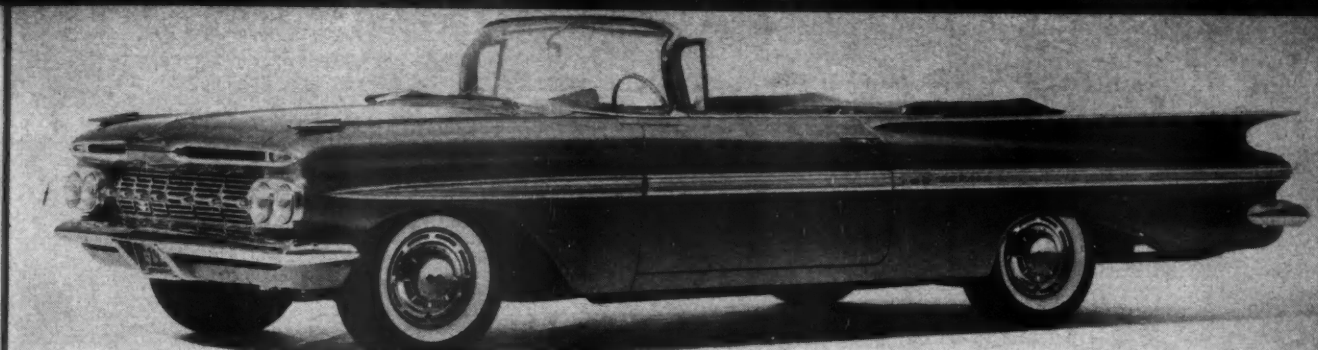
Pioneer in mass-produced air suspensions, GM's optional Level-Air ride is much improved mechanically for 1959. Lower spring rates have been responsible for a much softer ride than coil spring suspensions, at a slight sacrifice in body lean and

cornering. One of the outstanding features of any air-bag suspension is its ability to level the car under varying loads. For the motorist who is the single occupant on daily trips to and from work with weekend trips loaded with family, luggage, house trailer or a boat on the roof, air leveling is the answer. Changes in the air compressor, valving, and bag contour are all aimed at durability and trouble-free operation. Ford has withdrawn its air option for 1959, but Plymouth is using air in combination with springs for load leveling only and their handling and ride seem unaltered with this option.

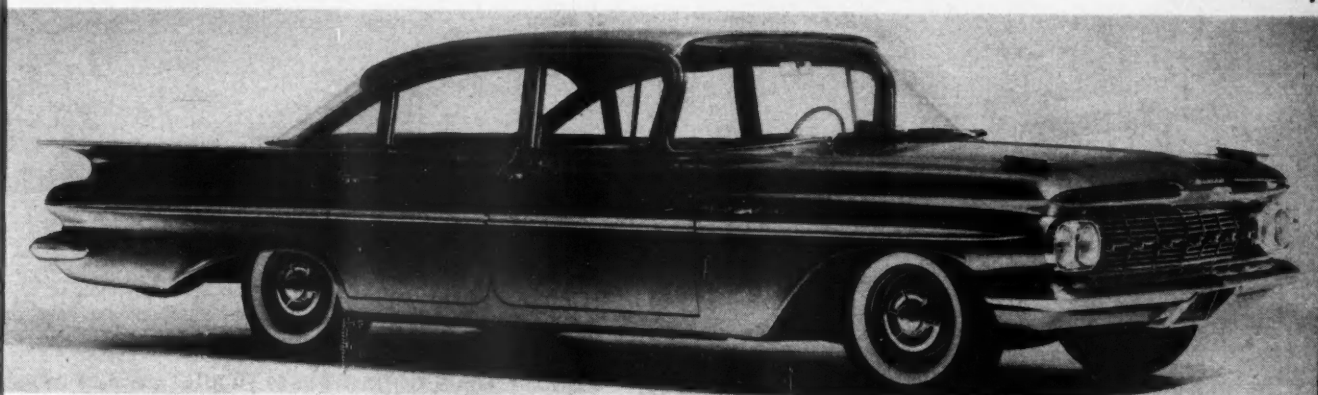
Maximum use of the mechanical advantage offered by power steering has been rather slow in coming. Chevrolet for 1959 has retained its steering ratio of 20 to 1 for power steering options, but increased it from 23 to 1 to 24 to 1 for mechanical steering. Naturally, this reduces the amount of force required to change the direction of travel but also increases the distance the wheel must be moved. The result is a mechanical steering with the ease but not the response of power steering. The 20 to 1 ratio for the power option is so feather-light that all the feel of driving has been removed, and response is still slow. A flexible coupling between the steering box and the steering wheel shaft has been added to reduce transmission of road shocks to the steering wheel. Overall, the mechanical and power steering is about the same as Plymouth in ease and response but not as positive as Ford's well coupled and lively ratio.

BRAKES CAME IN FOR THEIR SHARE of the "all new" spotlight for the coming year. Increased area, from 157 square inches to 199.5, provision for air cooling, and heat dissipation have produced a brake more in keeping with higher speeds and weight. The leading shoes on all four wheels are grooved to provide a more even heat distribution across the face of the drum, which has an added heat transfer flange that projects into the airstream underneath the car. New wheels, incorporating air path slots, are designed so air can pass over the most inner part of the drum. In operation, these are just about the best brakes in the "Big Three."

Mauri Rose, who has been working on brake engineering for Chevrolet for several years, told us that their research pointed to a few simple facts. "Keep 'em cool and give them enough area and you've got a good brake," and this is just what GM has done for 1959. The new power brake is functionally the same as last year's except that it uses the regular brake pedal and hydraulic master cylinder. It is a vacuum-powered component available as a regular production option, or as a dealer-



IMPALA CONVERTIBLE



BEL AIR 4-DOOR SEDAN

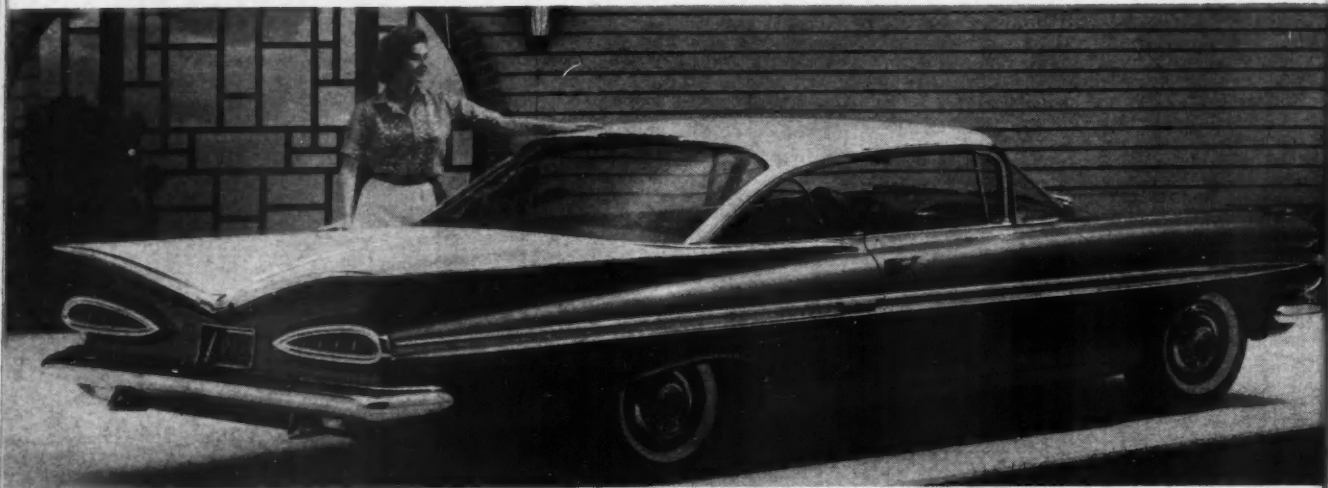


BISCAYNE 4-DOOR SEDAN

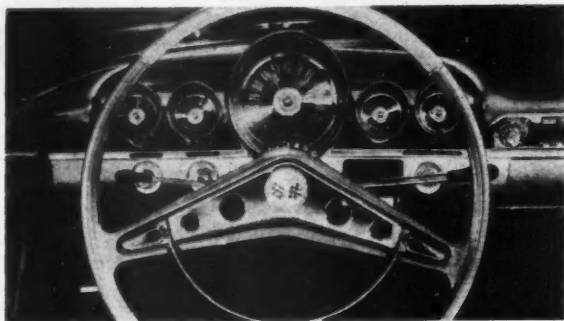


IMPALA SPORT SEDAN

CHEVROLET for '59 continued



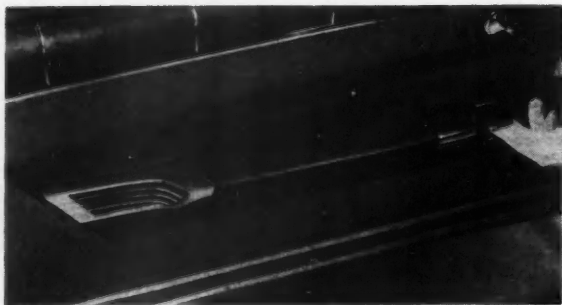
IMPALA SPORT COUPE



INSTRUMENT CLUSTER is well grouped for good visibility.



PASSENGER CONVENIENCE features distinguish dashboard.



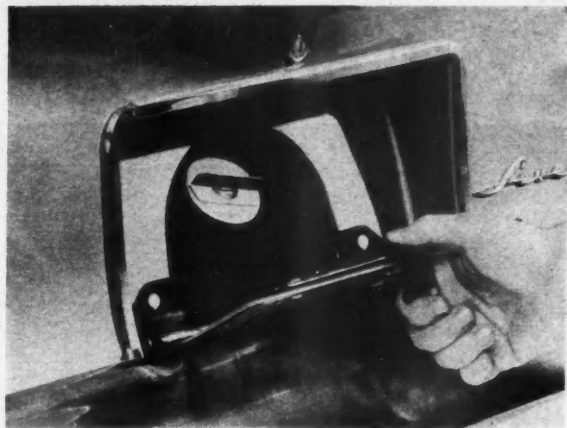
installed accessory that mounts on the same firewall point as the master cylinder. Here is a fine way to make the most of Chevy's new brakes with an assist that does not soak up engine power.

ECONOMY AGAIN ENTERS THE 1959 PICTURE, with the sales leaders improving and retaining six-cylinder engines and further developing some well-established principles on their V8s. Better breathing, both intake and exhaust, reduction of valve overlap and improved carburetor metering have, according to Chevrolet, brought about a five to 10 per cent improvement in fuel economy for the Six. This 235-cubic-inch engine has always been a reliable workhorse, and still does a good job of pulling the '59s. Among the V8 engines, the same procedures have been followed as far as breathing and carburetion, with changes in spark advance to provide less fuel waste while idling. Better cooling around spark plugs, and an optional dual exhaust system that reduces back pressure are fuel-saving improvements.

With the camshaft, carburetor, fuel injection and compression ratio options available for the 283-inch and the 348-inch engines, Chevy has a choice of eight different engines, plus the Six. If Chevrolet performance in previous years made their competitors sit up and take notice, they will be on the edge of their chairs with these engines. Following the industry moratorium on performance advertising, horsepower is low in the ballyhoo parade, but it's there if you want it.

Many improvements aimed at greater durability have been made in the optional Turboglide transmission. Former cone-type forward and reverse clutches have been replaced by multi-disc, eight for forward and six reverse, and a stronger five-spoke turbine hub and shaft give the drive a higher "abuse capacity." Thrust bearing changes made in mid-1958 on the Powerglide transmission have been retained. All three-speed standard and three-speed overdrive transmissions are continued without change except for the three-speed unit for the 348 engine. This now features a wider first and reverse gear for quieter operation and more durability. One of the finest close-ratio, all-synchromesh, four-speed gearboxes ever built is again available for the Corvette and all V8 engines except on the two- and four-barrel 283-inch. Posi-traction, a limited-slip differential, will be optional again on Chevrolets. Ideal for snow and other slick surfaces, Ford announced one for 1959 but none has been announced for the new Plymouths.

DOOR HANDLE protected by armrest is safety feature.



GAS FILLER CAP is conveniently located in center and concealed behind hinged license plate bracket and light.



IMPALA SPORT COUPE windshields and rear windows sweep well into roofline and increase visibility with

DIMENSIONALLY, CHEVROLET (like Ford and Plymouth) is lower, longer, has roomier interiors, increased luggage space and more glass. Wider bodies and thinner roofs have improved head-, hip- and shoulder room. Legroom is about the same, but Chevrolet has finally done something for the driver by lowering the front seat and the steering wheel. Visibility is good over the hood and wheel rim. With the new compound windshields curving farther back into the top, the driver can see signals almost overhead. An increase in rear window visibility of 74 per cent is also a driving aid but carrying the glass into the roof allows a lot of hot sun to pour onto the neck and shoulders of rear seat passengers. Ford and Plymouth have also overlooked this passenger discomfort with their rear windows creeping farther overhead. Heavy graduated tinting available as a special feature on the sport coupe would keep passengers cooler under certain sun angles. It is a must for air-conditioned cars.

Instruments that look like instruments are grouped in an easy-to-read cluster in front of the driver. The ashtray and radio are center-positioned for easy access by both driver and passenger. Thicker sound deadening material has reduced engine and tire noises. Wind noise, the howls and whistles that increase in volume with the speed, has been drastically reduced by setting the windows closer to the outside of the body. Opening the windings and windows while riding the high-speed course at the proving grounds provided good ventilation without a gale force blowing hair and hats or setting up a howl one had to shout over to be heard.

Other impressive features of Chevrolet's interior are the fine detailing and finish. Apparently the engineers have decided that elimination of ragged edges and sharp bits of metal trim could be accomplished by design rather than hand fitting on the assembly line. Very little metal is used this year on door panels



DUAL HEADLIGHTS are seven inches lower than last year and smaller parking lights fit into upper air intake.



more glass area and thinner pillars than 1958 models in background. Tinted glass option is a must for hot sun.

and the fabric has been carried clear over the interior window sills, for a smooth pleasing effect. More use is also made of combination plastic and fabric upholstery, comprising durability, coolness, and color selections to suit most every taste. The interior appointments and finish were the finest we have seen, among the "Big Three," especially in the so-called standard models.

INTERIOR CHANGES HAVE BEEN CARRIED into the wagons to make them more comfortable to ride in and to use. Seat folding features that allow them to be stowed into the flat floor quickly provide additional carrying space without the annoyance of removing seats or cushions.

Cargo capacity in the new station wagons has been increased to 92 cubic feet, measured to the rear of the front seat with tailgate closed, and luggage compartments in the sedans have a five-cubic-foot greater capacity with up to nine-cubic-foot increase in the sport models. Rear deck interiors seem better finished this year with fewer obstructing bumps that make loading difficult.

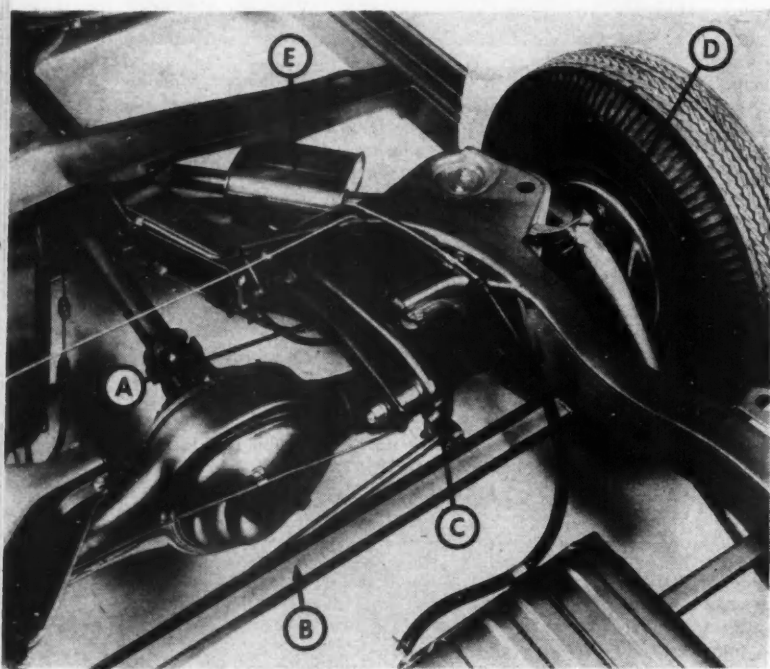
Under the hood it's a different story. The six-cylinder engine has room to spare but the V8s, especially with air compressor and power options, do a good job of filling most of the available space. Good location of the spark plugs makes them easy to service, but the distributor is still located well back on the engine, practically against the firewall.

Corvette was the subject of minor changes with removal of simulated hood louvers, new "bucket effect" seats and a few dash changes such as concave instrument lenses and a stowage bin behind the passenger assist bar. Standard on Corvette this year will be new radius arms to take axle wind-up loads off the springs, and a new option, sintered metallic brake linings. This

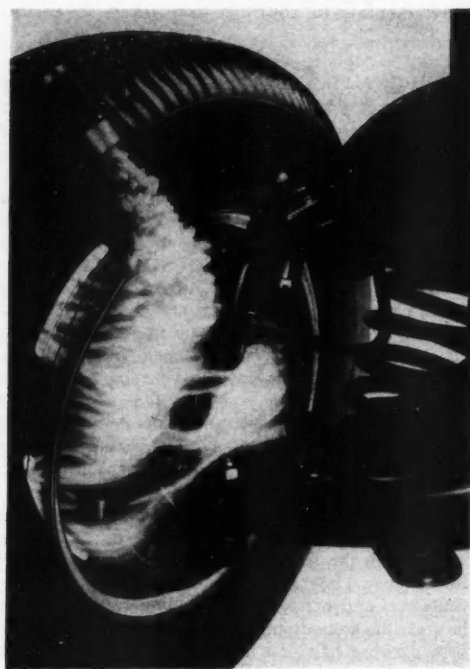
CHEVROLET for '59 continued



CORVETTE 2-PASSENGER SPORT CONVERTIBLE



NEW CHASSIS COMPONENTS: (A) Anti-twist arm, (B) extra cross-member, (C) anti-sway bar, (D) flanged drum, (E) resonator.



SMOKE BOMB shows path of air around backing plates and across drums for better cooling.



EL CAMINO PICKUP COUPE



NOMAD 4-DOOR STATION WAGON

is the type of material GM has been testing for several years on police cars and emergency vehicles. The four-speed gearbox installation in the Corvette features a reverse gear selector that makes it impossible to accidentally slide into reverse during rapid shifting.

WITH AN ALL-NEW DESIGN, loaded with improvements, one would think that the Chevrolet line for 1959 was most complete, but they have added icing to an already rich cake. A new vehicle, the El Camino, will be announced with the new models. Described as a sedan pickup, it looks like Chevrolet's answer to

the Ford Ranchero. Combining a roomy passenger car cab with a 33 $\frac{3}{4}$ -cubic-foot pickup-type box, the El Camino offers a smart utility truck with either Six or V8 engines and manual transmissions. None of the new passenger car styling has lost its identity in this new vehicle.

Air cleaners, thanks to the almost universal adoption of the highly efficient paper filter, are thinner and smaller, and some carburetor tuning is possible without removing them.

Chevrolet seems to have preserved their performance, created a new distinctive style, and maintained luxury throughout all their cars for the coming year. Public acceptance will tell the final story, which looks like one with a happy ending.



... offers body modifications, an economy engine that runs on regular gas, a less complicated two-speed automatic transmission, and a heavier frame.

FORD FOR 1959 bears a striking resemblance to the '58 models, despite the claims of "all-new sheet metal." Wider bodies, thinner roofline, and more engine and luggage space have made new sheet metal necessary, but like Plymouth, only trim and tail light changes make the exterior body style different from last year. As its competitors, Ford is lower, wider, and heavier, and will probably cost more, although no suggested retail prices had been released as of presstime. Chevrolet and Plymouth are attempting to lower operating costs with more efficient engines and better reliability. Ford has taken a new tack by further detuning engines to operate on regular gas and attempting to hit a happy performance medium by juggling axle ratios. One new development is a low-cost optional automatic transmission.

One thing Ford stylists wanted to be sure of perpetuating were the tail lights. Large as they were in 1958, stylists went back to 1957 for next year's lights. They seem even bigger, set in bowl-shaped housings that look like fluted jello molds. Tail, stop and turn lights all in one unit probably solve a lot of lighting problems for the engineer, but following behind them at night can be very confusing—and often blinding.

FORD DEPENDS A GREAT DEAL on frame support for body strength, and with wider bodies, wider frames are necessary. Compared to the slender X-type Chevy frame, the Ford looks like a bass fiddle. Box section rails have been bowed out almost to the outer tire width and are naturally much heavier. A modified hat section rear crossmember absorbs twist loads and supports rear suspension stresses. Semi-elliptical rear springs, with the axle mounted forward of their center, do the entire job of suspension, alignment, and axle torque twist control, the latter being a difficult job without some sort of trailing arm.

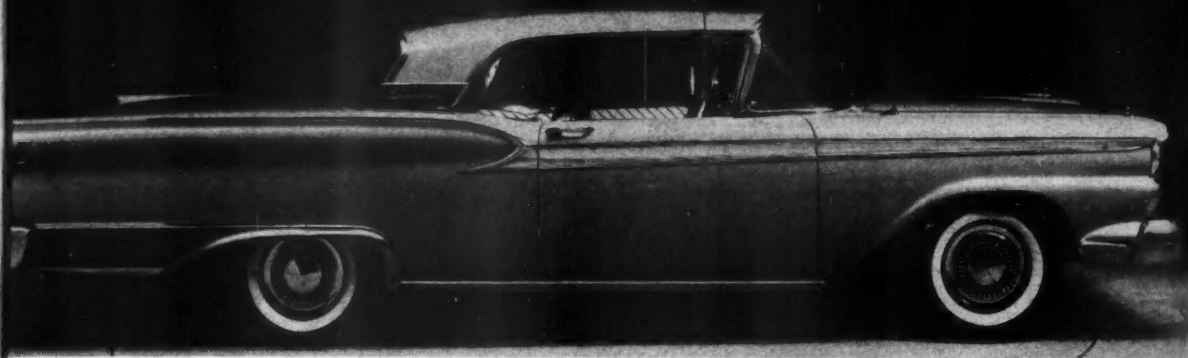
Chevrolet with their rear coil springs have been forced into isolating springing from torque and alignment duties, but Ford is still depending on the springs for all these assignments and it shows up in excessive lean in the corners. The air bag load leveling option, which, unfortunately, has been withdrawn for 1959, probably does as good a job of preventing axle wind-up as it does leveling the car, due to the way it is mounted. One feature that impressed us was the aircraft-type nylon air lines in the air bag system. This is about the toughest stuff there is for holding pressures and providing long life. We may some day see them replacing our hydraulic lines.

A MAJOR CHANGE IN FRONT SUSPENSION is aimed at reducing wheel alignment costs. Slotted holes and serrated washers eliminate cams and shims for adjustment and cut labor time both in assembly and for future alignment checks. Chevy is sticking with their slotted and shim method but Plymouth has a new cam adjuster for front ends for 1959.

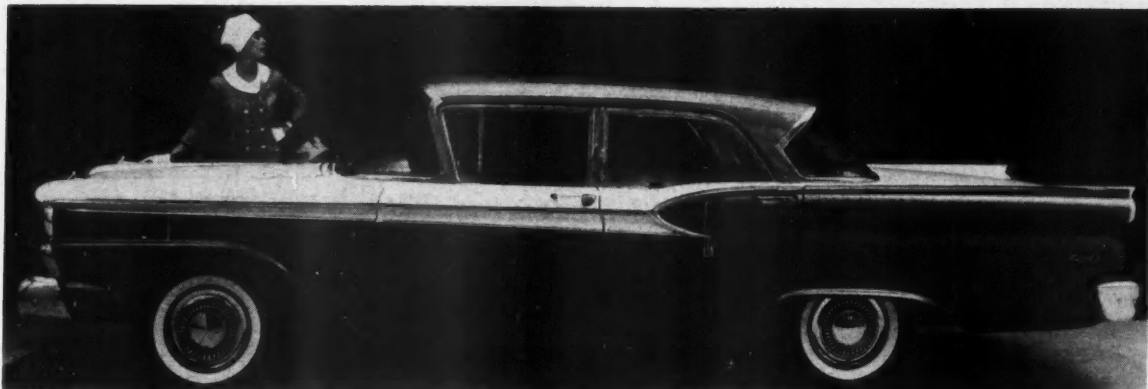
In keeping with Chevrolet's optional Posi-traction limited-slip differential, Ford has announced one of their own design as a '59 option. Unlike other competitive units, Ford's is interchangeable with production center sections and provides locking action at all times until slipping action is required, instead of locking only when one wheel is slipping excessively.

It is a shame that Ford has not solved their excessive body lean on sharp cornering because they have a steering system that is a real handler. The recirculating ball system with or without power assist, minimizes lost linkage motion without destroying the positive feel. There is a noticeable, but not objectionable, transmission of road shock in the standard unit. The power option eliminates this and still preserves the feeling that the steering wheel is connected to the front wheels. Chevrolet approaches this but Plymouth is so light one wonders if the wheel is connected to anything.

FORD HAS AN "ALL NEW" FEATURE for 1959 (if you don't look back too many years)—shades of the Model T, it's a two-speed transmission. Striving for economy in manufacture and consumer cost, the new transmission is a two-band, servo-operated automatic in an aluminum case, containing 105 fewer parts, and is 22.8 per cent lighter than a regular Fordomatic. The planetary gear train is composed of two bands, one for low and one for reverse. A multi-disc clutch is for high, which is direct drive. Under a feather-light throttle foot the low-to-high shift occurs at about 18 mph. Under full acceleration our test car was indicating 58 mph before it went into high. Acceleration is very good and standing starts (on a 17 per cent grade) were made without hesitation. Slightly lower rear axle ratios are necessary with the six-cylinder and the 292-cubic-inch V8 for best performance with the two-speed automatic, but engine revolutions in low did not seem excessively high nor did the car labor on steep grades from a standing start. A selector lever allows low-speed operation only and may be used to shift down for engine braking. This unit is a real step toward economy by



FAIRLANE 500 SKYLINER



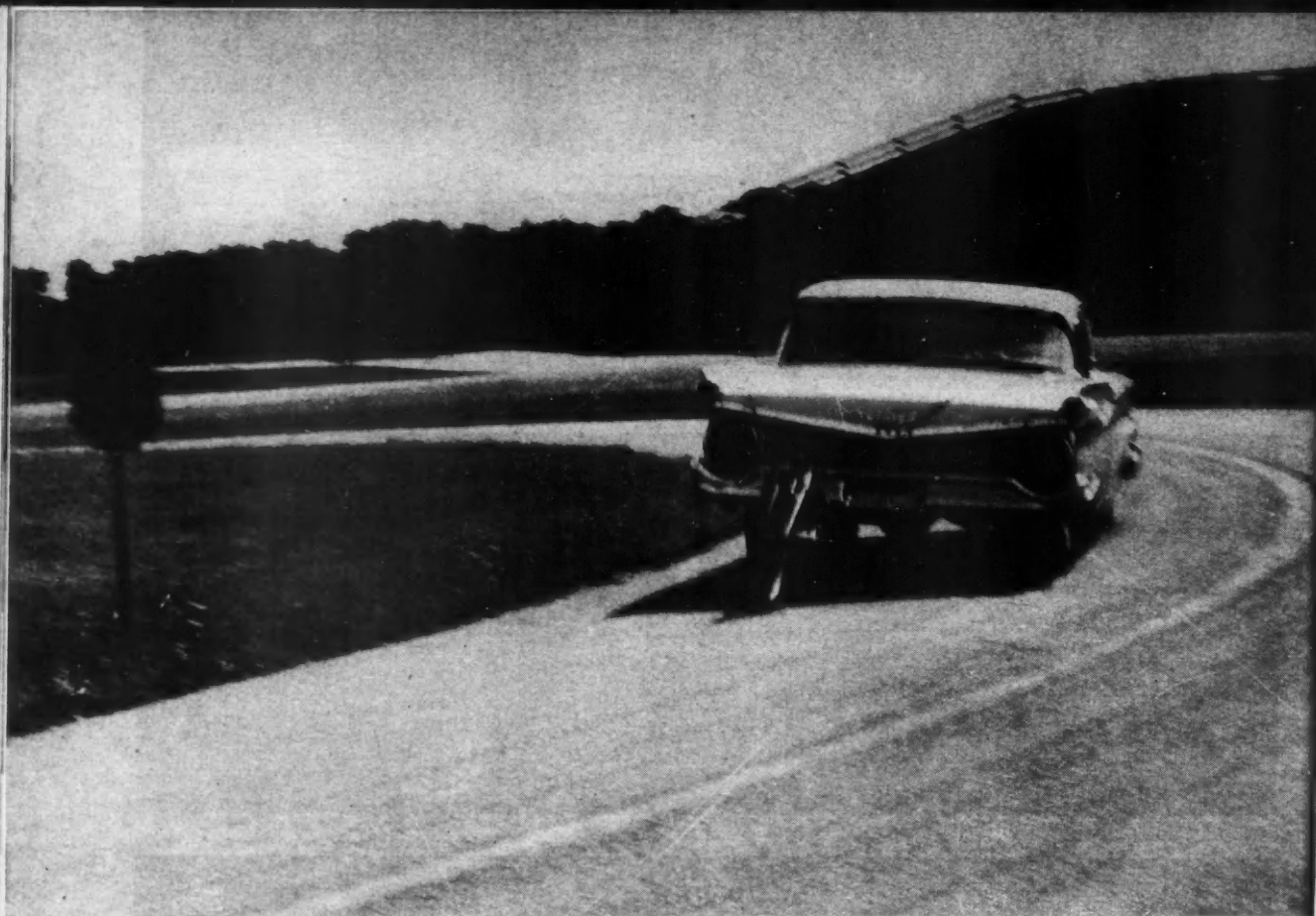
FAIRLANE 4-DOOR SEDAN



FAIRLANE 500 CONVERTIBLE



FAIRLANE 500 2-DOOR HARDTOP



FORD for '59 continued

simplification that can be passed on to the consumer in lower initial and maintenance costs.

Ford engineers, like Plymouth, have been playing around with valving on their regular automatic transmissions in an attempt to produce a more lively shift. The Ford Cruise-O-Matic dual range has been adjusted to take better advantage of low-speed torque, and coupled with slightly higher rear-end ratios it performs well with the lower compression 1959 engines. One big advantage of dual range is the ability to use second gear for pulling out of mud, loose gravel or snow, without spinning the wheels, and it provides engine braking for downgrades.

THREE DIFFERENT BRAKE SHOE AREAS appear for the 1959 Fords. The 180.2 square inches, as last year, will be on the regular cars, with station wagons and the retractable hardtop going to 191.4 square inches, and the Thunderbird carrying a big 225.5 square inches. Increasing braking area according to weight is an effective way to solve braking problems, but the highest braking in this case is not on the heaviest vehicle. Almost a hundred pounds lighter and certainly without the space to carry the overload of the station wagon, the Thunderbird has the heaviest brakes. While the braking was adequate in the test cars, we would like to see the added safety of increased braking area on all models, especially the wagons.

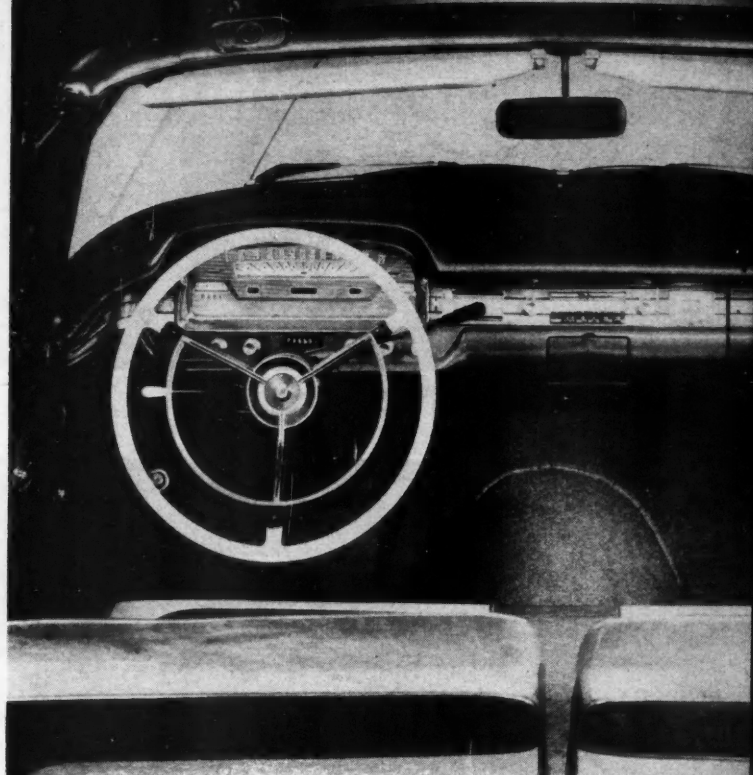
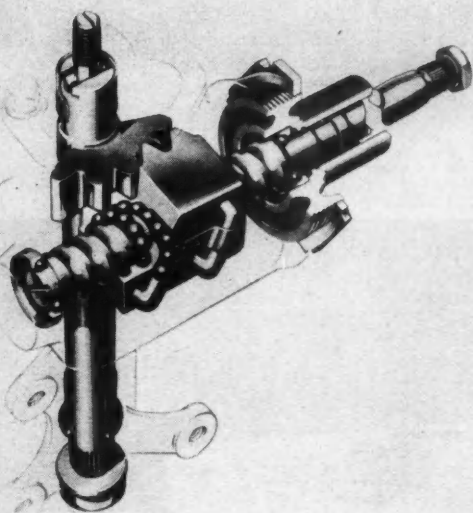
A braking test that Ford, Chevy and Plymouth survived very well was one MOTOR TREND made up. Called the "freeway stop," the wheel is cut sharply at speeds between 45 and 55 and the brakes applied hard. A smooth quick stop without the sickening slide into another traffic lane surprised us as well as the proving ground engineers.

UNDER THE HOOD—and believe us, those big V8s with all the power accessories really fill up the space—Ford is offering four powerplants, including a Six. Despite the crowded conditions, the spark plugs are easy to change and the forward-mounted distributor delights mechanics. Lower hood lines have made air cleaners thinner and hastened the adoption of the highly efficient and re-usable paper filter. Ford continues a practice Chevrolet and Plymouth would do well to follow: a direct and positive cool air duct to the carburetor. Underhood temperatures are much the same as radiator temperatures and even higher on hot days. Cooler dense air provides much better mixtures for engines and an appreciable increase in power and gas mileage.

Speaking of mileage, Ford is attempting to achieve economy by setting up their engines to use regular gasoline, which in some states is five cents per gallon cheaper than premium fuels. Close to a dollar a tank in savings is just like more miles per gallon and Ford is going to try it without losing too much in performance. We tooled an engineering car around the Dearborn course and tried some quarter-mile acceleration tests after we found that the 352 engine, driving through a dual-range Cruise-O-Matic, was pulling a 2.91 to 1 rear axle ratio. This was slightly lower than the regular 2.69 to 1 and on regular gas turned the quarter-mile at 80 miles per hour in 17.5 seconds. This engine was driving no power accessories, but the speed and elapsed time are pretty respectable for a so-called de-tuned engine.

IT IS ALMOST IMPOSSIBLE to talk about wider bodies without mentioning frames again. Ford frames now extend out to nearly

RECIRCULATING BALL steering mechanism provides a lively play-free maneuverability with either mechanical or power option, but it is lost with excessive body lean even on mild cornering. A lower steering wheel position improves forward visibility, still allows plenty of legroom for easy exit. The instrument cluster and shift lever indicator are softly illuminated for non-glare night driving and the dash cowling is well padded.



maximum body width. Passengers enjoy more room because they now sit between the frame rails. This allows deeper floorboards, more legroom, and lower center of gravity. The passengers are virtually surrounded by the box section frame and Ford is recalling some of their previous safety program by referring to it as a "guard rail."

Inside these wider bodies, Ford joins with Chevrolet and Plymouth in using more fabrics in combination with plastics in upholstery, producing a greater variety of colors and cooler seat coverings. Production and quality control will be very important to Ford interiors as metal trim strips used on door panels could well lead to ragged edges and sharp corners.

DRIVING COMFORT IS GOOD and increased glass area improves all-around visibility. Rear windows, creeping into rooflines, expose the rear passengers to some pretty uncomfortable sunshine, but Chevrolet and Plymouth are furnishing about equal amounts of excess vitamin A to the shoulders and necks of their passengers. Ford has finally come to the foot-operated parking brake. Lower seats and chassis require a little more room when entering or leaving the front seats and the elimination of the brake handle will save a lot of bruised knees.

Soundproofing materials are thicker and are used on more surfaces than ever before, reducing engine and road noises to a mere whisper. However, the wind noise at speed is a howling banshee. Touring the outer speed course at the proving grounds in a Fairlane 500 at speeds from 60 to 85 miles per hour produced wind noises with the windows open, and sizzling whistles with them closed, making normal conversation impossible. Chevrolet and Plymouth body designs bring the side glass sur-

faces closer to the outer body surface, while Ford's recessed panes trap air into noisy turbulence.

Increased demand for air conditioning has the Big Three prepared very well for this option. Ford, in particular, has designed their heating and ventilating system so that much of the ducting can be retained with an air conditioning installation. Dealers can make that change and this package varies slightly from the factory-ordered unit.

INSTRUMENTATION is still more ornamental than functional, with lights for oil and generator and a sweeping speedometer dial with smaller versions of it indicating fuel and temperatures. Ashtray and radio are centered, and the glove compartment is generous. Cowl covering in all models is a low-reflection plastic over non-resilient padding, a nice safety feature followed by Chevrolet and the deluxe model Plymouths. Seating is good, driver visibility with lowered seats and wheel is excellent, and the mechanical seat adjustment works well with driver only but needs a little assist when carrying front seat passengers. Driveshaft tunnels, like all lower 1959 models, are more noticeable, but increased legroom makes them less objectionable.

Engine, power, and accessory items are still on the option list for 1959. You will be able to carry more passengers and more luggage in the new cars, so give yourself and the engineers a break when selecting options. To expect a car to ride as well with one passenger as with six, or to tow a trailer and fill up the luggage space with heavy gear, without taking advantage of load leveling or bigger engines, is just asking too much of engineering. Decide what you need and order it. Ford can supply it.



COUNTRY SEDAN 4-DOOR STATION WAGON



THUNDERBIRD CONVERTIBLE



THUNDERBIRD HARDTOP

Who'll Be Top Dog in '59?

How they compare in the tape measure department

	CHEVROLET				FORD				PLYMOUTH			
BODY STYLES	Biscayne: 2-D sed., 4-D sed. Bel Air: 2-D sed., 4-D sed. Impala: 2-D sed., hdt., conv.; 4-D sed., hdt. Brookwood: 2-D 6-pass. sta. wag. 4-D 6-pass. sta. wag. Parkwood: 4-D 6-pass. sta. wag. Kingswood: 4-D 9-pass. sta. wag. Nomad: 4-D 6-pass. sta. wag. Corvette: 2-pass. spt. cpe.				Custom 300: 2-D sed., 4-D sed. Fairlane: 2-D sed., hdt. Fairlane 500: 2-D sed., conv., hdt.; 4-D sed. Country Sedan: 4-D sta. wag. Skyliner: 2-D conv. Thunderbird: 2-D conv., hdt.				Savoy: 2-D sed., cpe.; 4-D sed. Belvedere: 2-D sed., hdt.; 4-D sed., hdt., conv. Fury: 2-D hdt.; 4-D sed., hdt. Sport Fury: 2-D conv. Suburban: 2-D 6-pass. sta. wag., 4-D 6-pass. sta. wag., 4-D 9- pass. sta. wag.			
ENGINES	Cu. In.	C.R.	Carb.	HP	Cu. In.	C.R.	Carb.	HP	Cu. In.	C.R.	Carb.	HP
6-cyl.	235.5	8.25	1-bbl.	135	223	8.4	1-bbl.	145	230	8.0	1-bbl.	132
V8	283	8.5	2-bbl.	185	292	8.8	2-bbl.	200	318	9.0	2-bbl.	230
	283	9.5	4-bbl.	230	332	8.9	2-bbl.	225	318	9.0	4-bbl.	260
	283	9.5	FI	250	352	9.6	4-bbl.	300	361	10.1	4-bbl.	305
	283	10.5	FI	290								
	348	9.5	4-bbl.	250								
	348	11.0	4-bbl.	300								
	348	11.0	3 2-bbl.	280								
	348	11.0	3 2-bbl.	315								
TRANSMISSIONS												
Manual	3-speed, with o.d. (opt.) 4-speed (opt.)				3-speed, with o.d. (opt.)				3-speed			
Automatic	Powerglide 2-speed Turboglide 2-speed (opt.)				Fordomatic 2-speed Cruise-O-Matic 3-speed (opt.)				PowerFlite (opt.), TorqueFlite (opt.), PowerFlite with o.d. (opt.), TorqueFlite with o.d. (opt.)			
AXLE RATIOS												
Manual	3.55, 3.36, 4.11 (o.d.)				3.56, 3.70 (o.d.), 3.89 (sta. wag.)				3.31, 3.54, 3.73			
Automatic	3.36, 3.08				3.56, 2.10, 2.91				3.31, 4.10, 2.93, 3.91, 3.73			
WHEELS	14-inch				14-inch				14-inch			
BRAKES	199.5 sq. in.				180 2 sq. in., 191.4 (sta. wag.)				207 sq. in., 230 (sta. wag.)			
SUSPENSION												
Front	Coil springs, air bag (opt.)				Coil springs				Torsion bar			
Rear	Coil springs, air bag (opt.)				Leaf springs				Leaf, air bag (opt.)			
STEERING												
Mechanical	Recirculating ball				Recirculating ball				Worm and roller			
Power	Recirculating ball				Recirculating ball				Rack and sector			
INTERIORS	Front	Rear			Front	Rear			Front	Rear		
Headroom	36	34-37			38-40	37-39			33.7-35.7	33.7-34.7		
Legroom	45	38-43			45	37-42			45.5	36.5-42.5		
Hiproom	66	66			62	63-64			63	56-62.7		
WEIGHT	3545-3969 lbs.				3626-4241 lbs.				N A			
WHEELBASE	119				118				122			
TREAD	60.3 (F) 59.3 (R)				59 (F) 56.4 (R)				60.9 (6 cyl.), 61.4 (V8) (F) 59.8 (6 cyl.), 60.2 (V8) (R)			
HEIGHT	58.1-58.4				56-58				56.1-58.6			
CLEARANCE	6				6-6.6				5.35-5.54			
WIDTH	79.9				76.6				80			
LENGTH	210.9				208				217.4			
POWER OPTIONS	Brakes, steering, seats, windows NA—Not announced (at presstime)				Brakes, steering, seats, windows				Brakes, steering, seats, windows			

Hill's Win at Le Mans

Was it a thrill? "Yes. It is the greatest sportscar race in the world . . . the most famous . . . the most widely publicized . . . the one every driver dreams of winning."

by Phil Hill

as told to Gordon Wilkins

LE MANS, 1958 WAS OVER. The evening sun was struggling through a watery sky and the crowd was making its way home to dry sodden clothes, leaving behind swamps of brown mud in enclosures and car parks, littered with crumpled newspapers and the debris of numberless picnics. We were in the Marchal bar on the top story of the pits—Gendebien the Belgian champion, America's Phil Hill, Jean-Pierre Marchal and the Commandant of the Gendarmerie—taking a quiet drink and running back over the highlights of the past 24 hours. The two drivers were also drinking the health of the Commandant and his men, for only half an hour before the disciplined blue cordon had saved them from being trampled or squashed to pulp by an enthusiastic Gallic crowd. Waves of them flowed over fences, retaining walls and earth banks, shouting their acclamation for Gendebien and "Pheeleel." There had been nothing like it in American sporting annals since Jimmy Murphy sent the stones flying from the wheels of his Duesenberg to win the French Grand Prix on this same Le Mans circuit in 1921.

To look at them, you would never think that these two drivers had just covered nearly 2550 miles in 24 hours at an average speed of over 106 mph, yet they had had very little sleep. One of the problems posed by rising speeds is the reduced opportunity for resting when off duty. In their efforts to prevent undue driver fatigue the organizers fix the maximum number of consecutive laps that can be done by each driver, but they seem to have overlooked the fact that with rising speeds these laps are being covered in such a short time that the off-duty driver can no longer settle down for a proper sleep. Hill and Gendebien were changing over roughly every 2½ hours, so by the time the driver going off duty had unwound a little, caught up with the general picture of the race, and had a wash and a meal, he couldn't hope to get more than a short nap. Neither Hill nor Gendebien had had more than a couple hours' sleep, but both spoke highly of the soothing atmosphere of the quiet and well-equipped hostel run for drivers by Shell; a very different thing from the bell tents where drivers vainly sought sleep to the roar of exhausts and the babble of loudspeakers not so long ago.

They were elated but not particularly surprised at their victory, for they had obviously planned for it well beforehand. "What worried us was getting into the lead long before we expected," said Phil. The lead position is a lonely place and it's hard to keep your mind off all the things that might go wrong when you have to hold on to it for the best part of 20 hours.

Both of them had wide experience in top-flight sportscar events and this was Phil's fifth Le Mans. He drove on the old circuit in 1953 and again in 1955, the disaster year. Then he raced on the modified circuit in 1956 and 1957. Last year he covered only one lap and this year, when Gendebien handed over the car for the first time he thought for a few dreadful minutes that history was going to repeat itself. The car felt uneasy at the rear end and as he wallowed around the slow corner at

continued on page 46

Speeding through squalls of hail and rain, Hamilton's Jaguar spun, flipped, threw Hamilton out, and hurtled across the road directly in front of Hill's Ferrari.

Illustrated by Carlo Demand

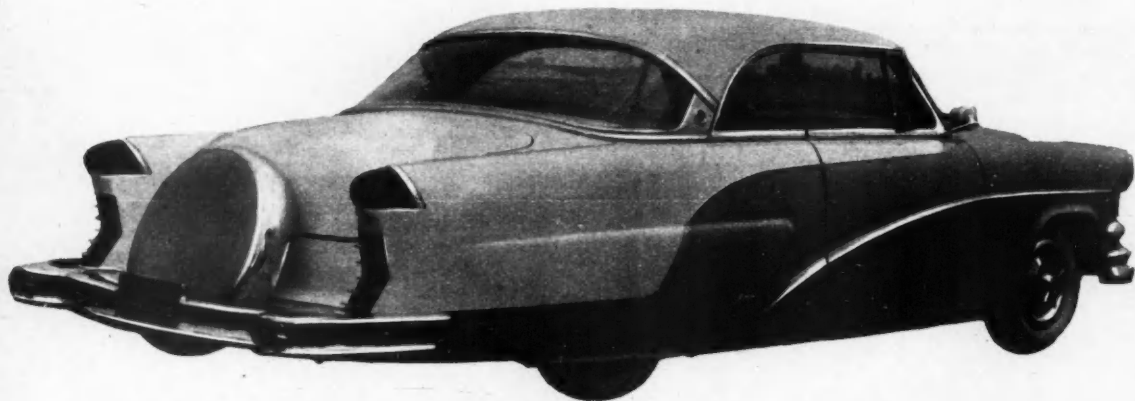


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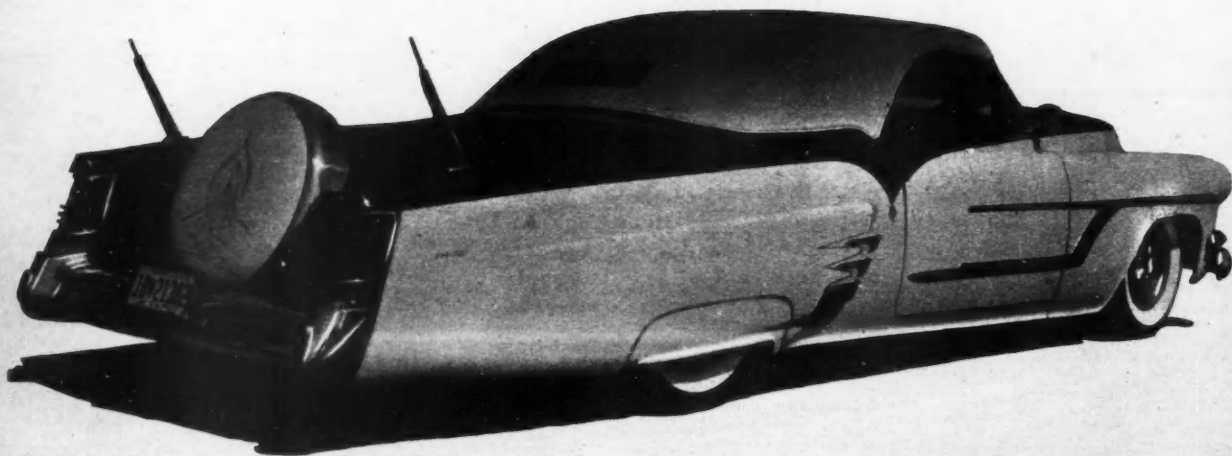


**MT's Custom Car Editor
tours the nation,
surveying the latest
trends in customs**

Custommodernizing coast-to-coast



FROM IOWA comes this '54 Ford with unusual tail light treatment using '54 Packard lights with handmade vents beneath. Chrysler bumper has quad exhausts cut into the face bar.



FROM FLORIDA, this '53 Olds has rear quarter panels from '54 Merc blended into body and extended 20 inches to conform with Continental tire mount. One-piece top is padded.

FOR A FIRST-HAND LOOK at whether the twain shall ever meet, George Barris decided on an East vs. West study of current custom trends across the country. To show eastern customizers some of his own western-bred handiwork, George made the tour with three of his prize projects: the Aztec Chevrolet, Kopper Kart, and Jayne Mansfield's Continental Mark II. While winning Sweepstakes and Best Car awards, George also photographed entries in many custom shows including the Autorama (Sacramento, Calif.), Motor Show (Portland, Ore.), Rod and Custom Show (Fort Wayne, Ind.), United Custom Car Show (Columbus, Ohio), Little Motorama (custom club show in New York), and the Autorama (Huntington, W. Va.).

An analysis of the cars seen during his seven-week, 10,000-mile trip pointed up that while customizers everywhere seem to employ the same technical procedures, esthetic tastes vary. There are regional preferences for certain treatments which do not seem to spread—such as bubble skirts in the East and Midwest. Other techniques, such as painting and scalloping, are popular nationwide—although there are as many approaches as there are artists.

On the following pages are photographs of representative custom stylings from all parts of the country. While readers may have individual preferences, it must be agreed that design individuality is not the sole possession of any one section of the country—customizing is truly a national sport. /MT

by George Barris Custom Car Editor



OHIO—Outside exhaust pipes on this '50 Ford match fender shields. Kaiser bumper cross-bar fits around license plate.

CALIFORNIA — Vertical quad headlights, mesh background, Buick bullet modernize '56 Chevy.



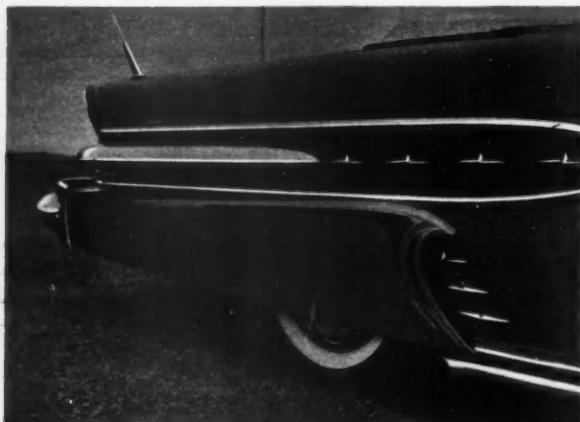
INDIANA—Its top chopped four inches, this '53 Studebaker coupe has also been lowered more than five inches.

Stock headlights and tail lights are frenched with shaded top section. Rear window is made of plexiglas.

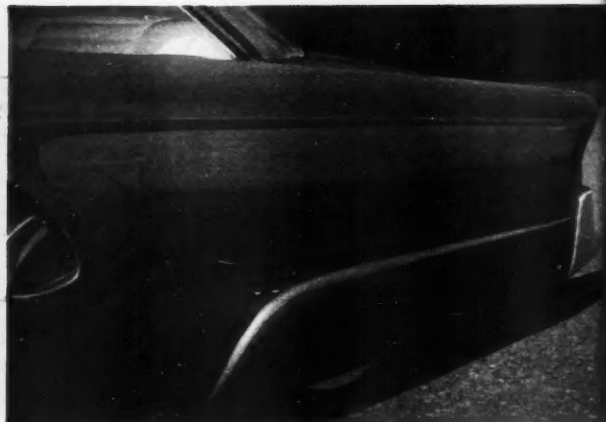


Skirts & Fins

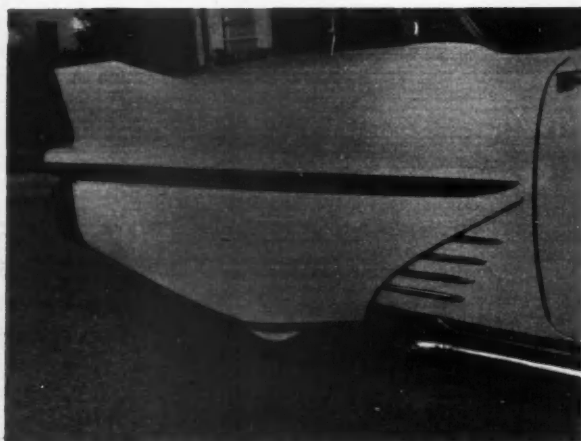
INDIANA — Fenders flare out from '56 Ford exhaust-tip tail lights on '50 Buick tapering sedanette.



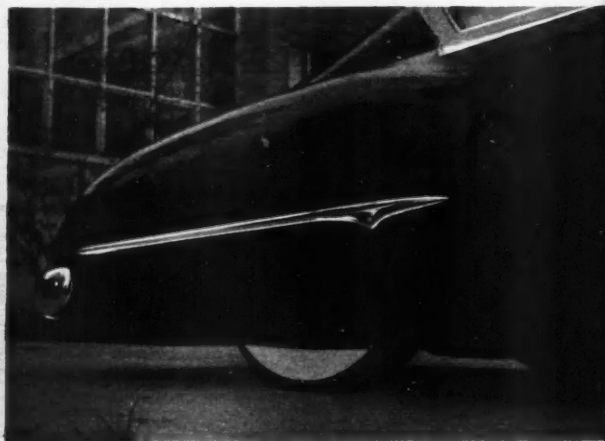
WEST VIRGINIA — Universal Fox skirts on '57 Pontiac form functional aircoop, accentuated by stars, paint.



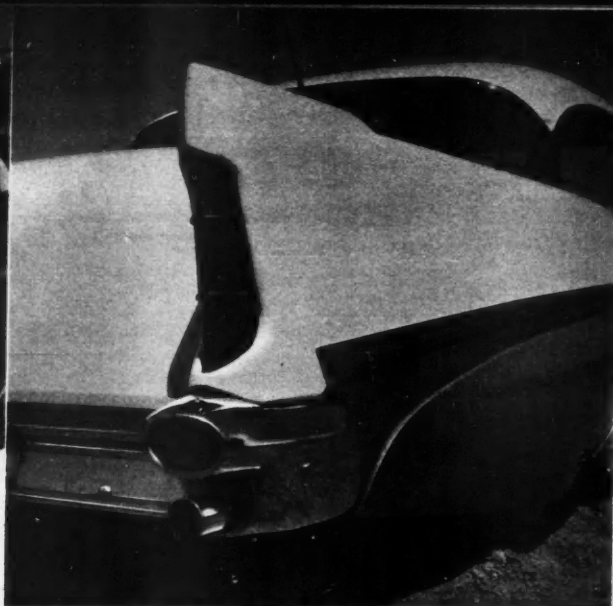
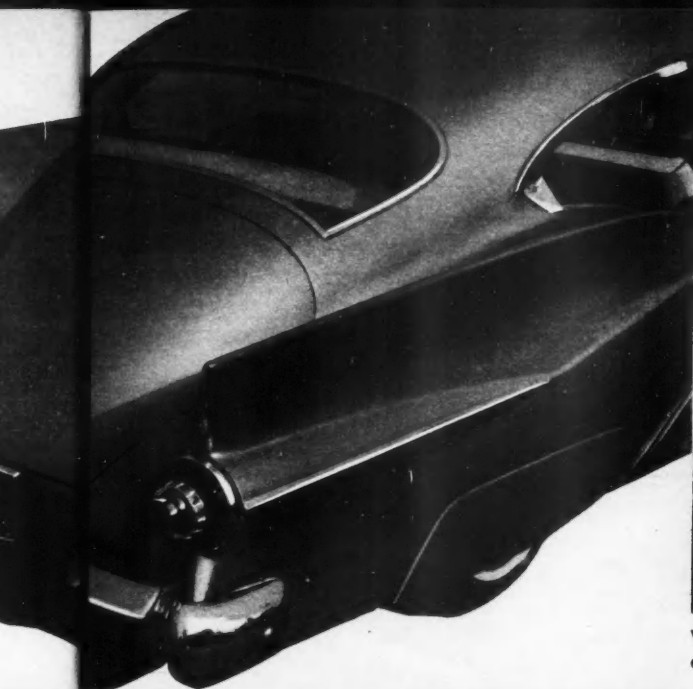
CALIFORNIA — Popular on West Coast, '57 Merc skirts on this '56 have been fitted to match bottom of body line.



OHIO — A favorite Eastern treatment, bubble skirts with curved bottom on '58 Cadillac add to long, low look.



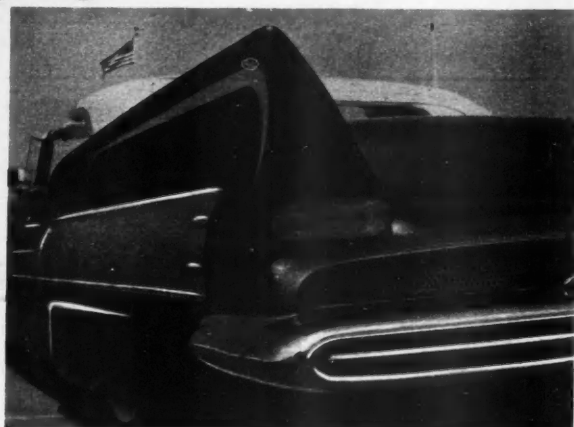
MICHIGAN — Skirts on this '51 Ford have been hand-fitted into the fender opening and flushed with bottom line.



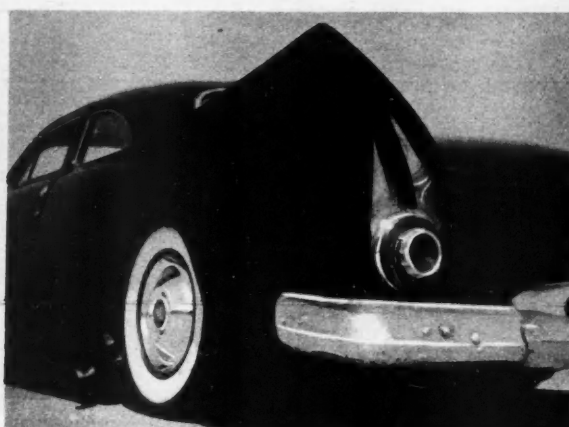
WEST VIRGINIA—Example of mild modification is small fin added to '57 Chevy over '56 Chrysler frenched tail lights.



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line.

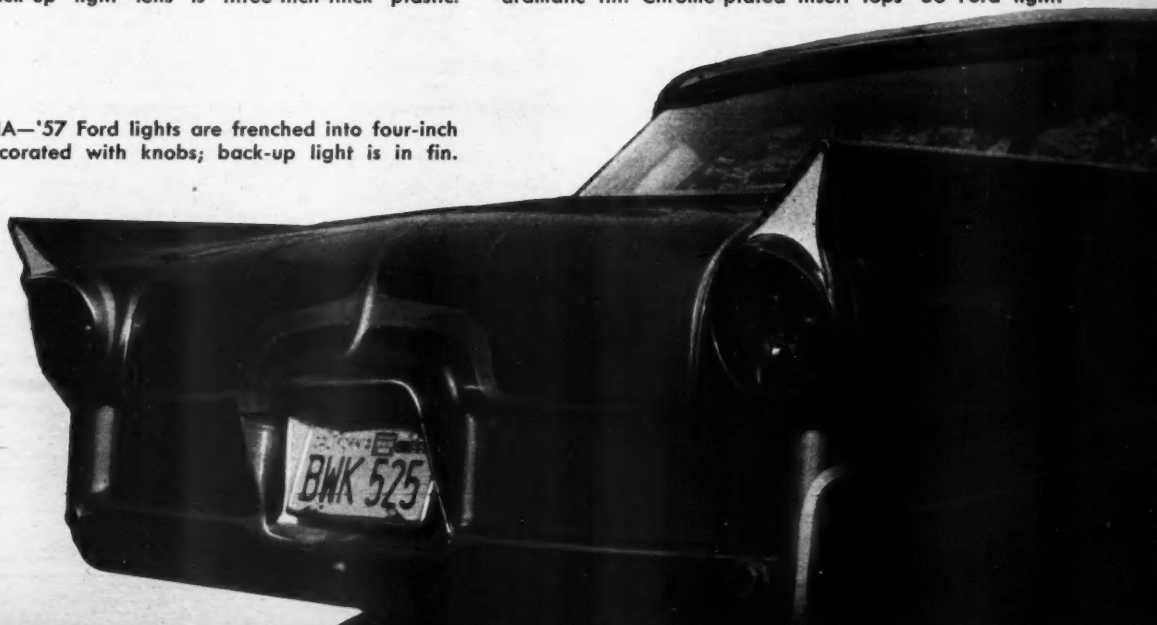


CALIFORNIA—Fins extend to roll in body siding on '55 Chevy. Back-up light lens is three-inch-thick plastic.



MICHIGAN—Full cut-out quarter panel on '51 Ford forms dramatic fin. Chrome-plated insert tops '56 Ford light.

CALIFORNIA—'57 Ford lights are frenched into four-inch tunnel, decorated with knobs; back-up light is in fin.



fitted
line.

Customizing coast-to-coast Fronts



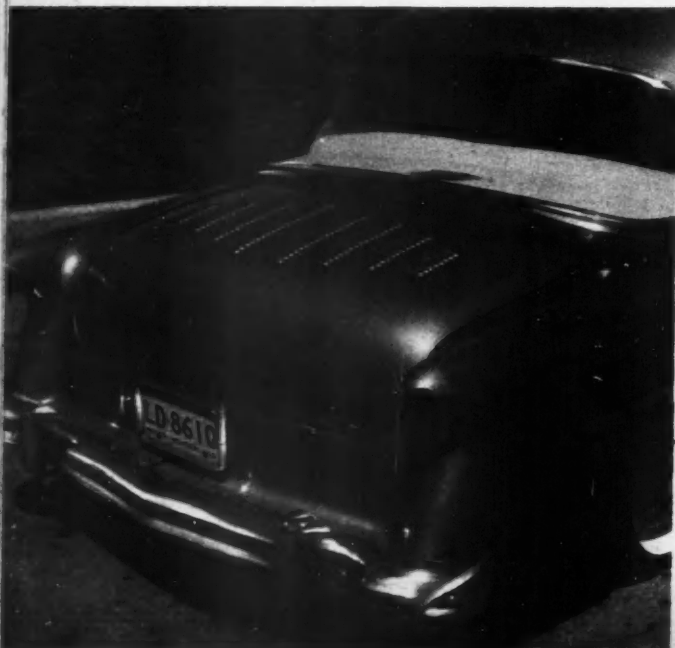
MICHIGAN — Three-inch-deep frenched headlights and functional V-tunnel hood scoops individualize '55 Olds.



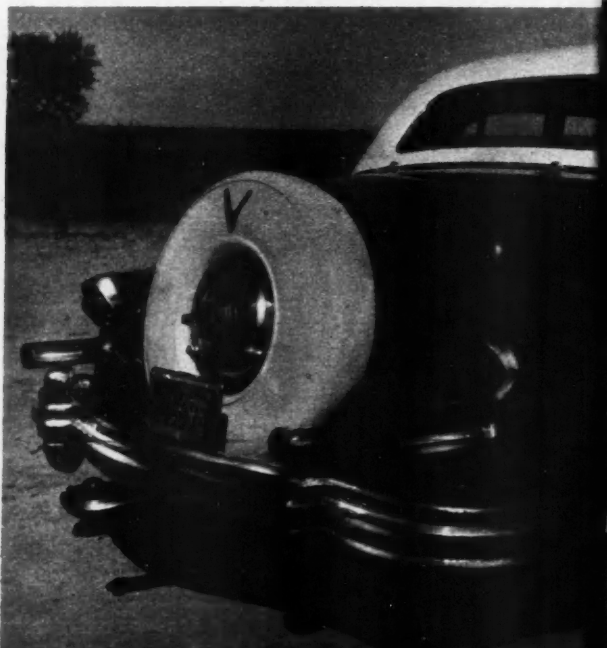
OHIO—With hood emblems removed, '58 Impala gains front-end distinction via metallic paint scallops, striping.

Rears

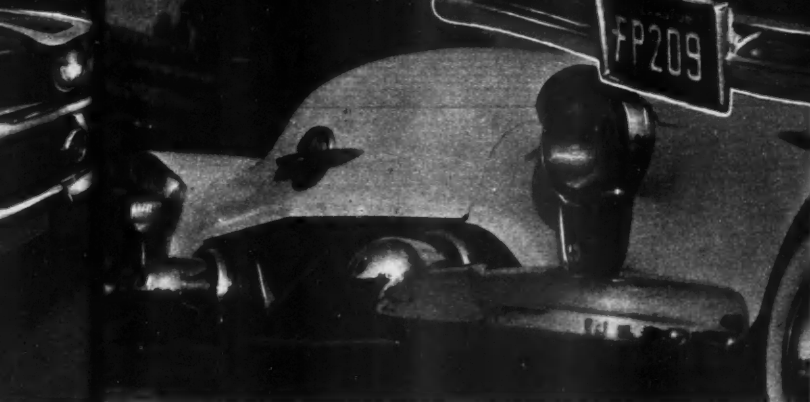
MICHIGAN—Louvered deck offers unusual treatment on Detroit '54 Ford; '56 Olds tail lights are frenched in.



PENNSYLVANIA—Customized classic, this '41 Continental has Pontiac tail lights, exhaust tips, Kaiser bumper.



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OKLAHOMA—Blended bullets highlight split bumper on '52 Olds. Perforated mesh has been fitted to grille opening.



TEXAS—'52 Ford grille is made from ¼-inch by 2-inch strap metal, with shell frenched into fenders and splash pan.

gains
ripping.

mental
bumper.

OHIO—Corvette tail lights and Jaguar wire wheels fitted to the original drums provide sportscar touch on this '51 Mercury.



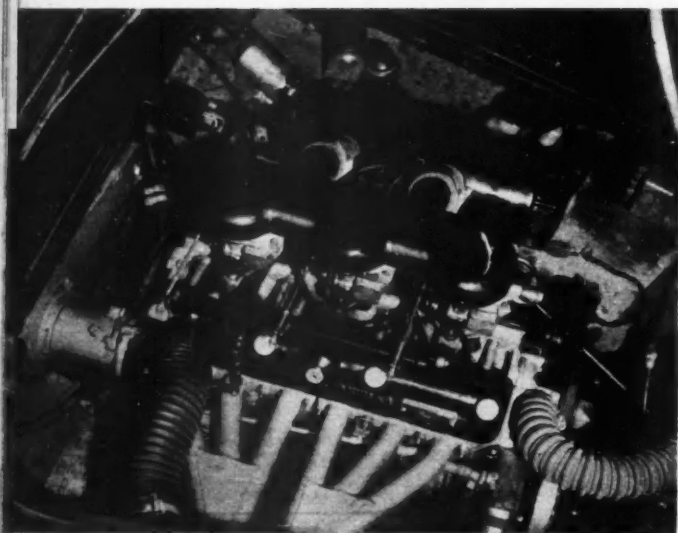
OHIO—Canted lights blend into flares on side panels of '49 Ford; bumpers are '55 Pontiac.



driving
around
with
**WALT
WORON**



R. JACKSON-MOORE CHECKS OUT ACCELERATION FIGURES OBTAINED WITH STOPWATCHES, FIFTH WHEEL, ELECTRIC METER.



BRISTOL ENGINE sits well back. Points to service are easy to get at. Air cleaner covers three carbs.

REMOVAL of trunk floor (right, above) reveals tray of tools inset in spare tire. Interior setup includes easy-to-read instruments, adjustable wheel, handy shift.

Photos by Bob D'Olive



A. C. ACECA-BRISTOL



WHAT'S A GRAN TURISMO CAR? You've heard this Italian expression many times and have seen it in print, but does it mean anything to you? What about Grand Touring? Does that begin to take on any significance? If it doesn't, leafing through Webster won't be too enlightening.

You might find "grand tour, 1. a tour of continental Europe formerly taken by young men of the British aristocracy to complete their education; hence, 2. any tour like this." Doesn't help much, does it? If you try combining the two words, you come up with something like "great, chief, most important, main" for *grand*, and "a long trip" for *tour*. Then where does a Grand Touring car come from? I suppose if we were to make a literal translation we could assume it to mean *the best car to take on a trip*.

Since lots of cars get this moniker, what qualifies them for it? Are they huge hulks of machinery that carry six passengers and all their luggage on a weekend trip? Are they the kind you would use on a turnpike where you set the controls, and then play cards with your passengers? Hardly, and yet you'd find lots of people saying that this kind of car would be "the best car to take on a trip."

A GRAND TOURING CAR should be basically a car to *enjoy* on the open road, yet one that's docile for city driving, that protects you from the weather, and is universal enough to include grocery shopping on its list of weekly chores. It's a car for pleasurable driving—driving that's a little work, with a ride that, as most enjoyable things, tires you just a bit.

It should have acceleration at least equal to the best passenger car and better than some sportscars, with enough gears to always keep you in the right torque range for best power. The gearshift should be easy enough to shift so that you'll never be so lazy as to let the engine lug.

It should be able to cruise comfortably for hour after hour at high speeds, without any strain and give relatively good fuel economy at the same time.

It should have handling qualities to get you around the worst possible corners and through the tightest situations without losing control of the car. To do this it should have a responsive steering system and suspension to match.

It should have positive brakes that stop you each and every time you call on them, with no nosedive, no locking up, no swerve, and no fade.

It should be a bit more comfortable than most sportscars and because of added comfort features such as more heavily padded bucket seats, is usually heavier.

You'll be lucky if it carries more than two persons, one besides yourself. On the

other hand, to really *enjoy* motoring, that's probably all you'd want to carry at one time anyway.

In short, a Grand Touring car should have the qualities of an A.C. Aceca-Bristol.

HISTORICALLY, A.C. Cars Ltd. has a long and interesting history of building cars that have been noted for unusual design and/or good roadholding characteristics. Its present name was derived from the original name of Autocarriers—a term coined by one of the original founders for a commercial tricycle with aircooled engine and chain drive that they built in 1904. Through several reorganizations the present company emerged in 1930.

Today's car, based on a 1952 prototype, uses a tubular chassis, has transverse leaf springs in combination with wishbones front and rear to provide it with four-wheel independent suspension. The aluminum bodies are handbuilt, hammered out on wooden dies. Only three are produced each week (as opposed to eight to ten A.C. roadsters), and half of these are exported to the U.S.

Three different engines are offered: the normal 90-bhp A.C. six, the 105-bhp Bristol 100-B and the 125-bhp Bristol 100-D2. The Bristol 100-B (in our test car) has a maximum rev limit of 5000, couples to a 3.64 rear axle, and can be fitted with overdrive. The 100-D2 has a higher compression ratio (9 or 9.5 instead of 8.5), giving it a rev limit of 6000 with the same axle (no overdrive). Both Bristols are ohv two-liter sixes.

THIS COMBINATION easily qualifies the A.C. as a Grand Touring car. It's highly enjoyable on the open road, cruising at high speeds effortlessly. We took it at speeds up to 90 over deserted desert roads sprinkled with bad dips, with no bottoming, no floating, no swerving. The rack-and-pinion steering is more at home at fast speeds, taking some effort in town to turn the wheel through its two turns lock-to-lock. Without the independent rear suspension, we could have gotten into serious trouble on an unmarked right-angle turn (with sand on it to boot). Remembering that the right rear wheel lifts as you begin to lose traction, we punched the throttle, bringing the wheel back down and so we're here to tell about it.

Though the A.C. Aceca-Bristol is not as fast as our fastest American bombs with engines almost four times as big, its acceleration would keep it ahead of comparable sportscars such as the Porsche Speedster and Austin-Healey Mille Miglia. The top three gears are synchronized, but take some getting used to before you can make smooth shifts.

The standard hydraulic, two-leading shoe brakes are positive and fade-free; if you want to enter competition, disc brakes are available for the front.

The A.C. Aceca-Bristol certainly deserves a place among my hypothetical stable of most-wanted cars—even at the price of \$6599 p.o.e. West Coast. Where's the money tied up? At least \$900 in the handmade body. Another \$900 in the Bristol engine. The rest in the combination of leather upholstery equal to a Rolls-Royce, the fine finish, the very good performance, and the fact that you'll rarely see an A.C. grille other than your own.



TIRE DUST kicks up from both tires as another acceleration run is made. Best 1/4-mi. time was 17.1 & 80 mph.

PERFORMANCE

ACCELERATION

From Standing Start
0-45 mph 6.2 0-60 mph 9.8
Quarter-mile 17.1 secs. and 80 mph

Passing Speeds
30-50 mph 4.6 45-60 3.8 50-80 11.5

Speed in Gears
1) 40 2) 65 3) 82 4) 106

FUEL CONSUMPTION

Highway Driving, 24.4 mpg
Stop-and-Go Driving, 22.6 mpg
Fuel Used: Mobilgas Special

Economy is more than

Saving money is also a matter of proper maintenance--oil, lubrication, brakes, tires--and above all...good driving habits. Here's how you can cut costs in operating your car.

By William Carroll

SOME FOLKS HAVE MORE PROBLEMS than people. Take our telephone man: he's over to install a kitchen extension so I can answer phone calls while snitching beer from the icebox.

"Mr. Carroll," he asks, "what's the lowdown on this economy guff? There's no one I know getting mileage like Mobilgas Economy Run drivers, and you fellows testing cars always seem to report more miles per gallon than any of us get." While he is unhooking a test set from his belt I put together a reply that might clue him into the economy picture.

"Gasoline economy can be many things," I say, "such as easier driving, less traffic tension, lower service costs and, best of all, more value in your car at trading time."

Turning around, the phone man (by this time I found out his name was George), says, "Sure, that may be true, but does it make any sense for a guy like me to worry about saving a couple gallons of gas?"

I PULLED PAPER OUT OF THE DESK and while he stretched his neck, I jotted down a few figures. "Look, you could earn \$38 every 10,000 miles if you gained two extra miles from every gallon of gas you burn."

He gulped, got up, came around the desk, and hung over my shoulder while I showed him the totals. "This figures by multiplying the average price of gas, at 32c a gallon, by the difference in the amount of gas used. Savings are 119 gallons, if you improve from 14 to 16 miles per gallon."

"Yeah," he says, "I can see that . . ."

"Then how would you like to save one gallon of gas out of every four?" I asked.

"How?" he says, with a quizzical expression.

"By remembering to cut your speed on long stretches—say from a steady 75 to a steady 50. And, the next time you get behind the wheel—relax."

"You're joking," he says. "How can anyone relax and drive a car?"

"Figure it out for yourself. Most of us jump in the car, flip a key and take off like a scalded cat. Odds are 100 to one you'll be wasting gasoline and pushing yourself just as hard all day."

"SO NEXT TIME, TRY RELAXING. Stretch a little, get comfortable, check the rear view mirror, and be sure the transmission is in neutral. Put your foot on the brake and start the engine. It won't take more than 10 seconds to run smoothly, then you can drop in gear and roll off at moderate speed. Don't bother to sit for three minutes of idling to warm an engine because you think that saves gas. It doesn't. Engines use almost the same amount of gas idling to warm as they do being driven at moderate speeds."

"Yeah, that makes sense. I'll try it next time."

"When you have made a relaxed start, here's something else to try. You drive a lot, and know that each stop wastes gasoline. So it's obvious the less stopping the more economical your driving will be. One way to beat the traffic problem is to beat the lights."

He looks at me kind of funny on this one. "You don't mean running through on the yellow, do you?"

"Nope," I replied, "by watching ahead to judge signal timing.

Every light you hit on green helps to keep the green in your wallet. Nor is anything saved by 'dragstrip' starts. You should know that the hottest driver can trim only 10 per cent off the time to drive across town while using 35 per cent more fuel."

"I SUPPOSE YOU'RE RIGHT," he says, then continues, "You know, my dad had a stunt he thought made the engine start easier. After a trip, he'd race the engine for a moment, switch off the key, then hold the throttle wide open as the engine slowed down."

"That's a fine old-fashioned idea," was my comment. "It worked well in the old days but doesn't apply to modern cars. All it does is dilute the oil and cause rapid engine wear. If you're interested, here's a more modern way to save money when you stop: Use engine compression to slow the car before braking lightly. You'll save wear on the tires. You may not know it, but the real sign of a professional driver is in the way he stops—not the way he starts . . ."

"Here," he interrupts, "show me where you want the phone."

We head for the kitchen and while I show him where, George asks, "Tell me, Bill, is there an easy way to check mileage? I'm never sure whether I'm doing it the right way, or just the hard way."

"Depends on how accurate you want to be. Petroleum engineers and car testers use all sorts of gadgets, but all you need is a pad of paper and a pencil. If you're making a trip and want to figure the miles per gallon against your average speed, just make sure you have a watch. Now here's what you do . . ."

USING THE SAME PAPER we'd been marking with economy savings, I showed him how to set up columns marked **SPEEDOMETER**, **TIME IN**, **TIME OUT**, and **GASOLINE**. "Make a pencil mark inside the filler neck of the gas tank and have the attendant fill exactly to that mark. Now over here, under **SPEEDOMETER**, put down the mileage and under **TIME OUT** list the time in hours and 10ths you start the test."

SPEEDOMETER	TIME IN	TIME OUT	GASOLINE
23461.0	4.5 P.M.	4.6 P.M.	10.4
23582.0	6.8 P.M.	7.2 P.M.	8.6

Confusion bloomed on George's face like sunrise in the mountains. "What's this 10th-hour business?"

"It makes total time easier to figure at the end of a day's run. Don't bother to divide or multiply hours and minutes. It's too much trouble. Figure that six minutes is one-tenth hour and mark your time to the nearest 10th. For example: Eight minutes is still one-tenth hour because eight is closer to six than it is to 12. But 10 minutes, being closer to 12 than six, is listed as 2/10ths. Over a full day your allowances average out. Show under **TIME IN** and **TIME OUT** the time from every stop. At the end of a day it's easy to figure running time by adding together all the hours and 10ths you were on the road. Have the tank filled to the mark in the filler neck. Add this gas to all the day's purchases, omitting the first filling when you started. Figure mileage by dividing running time, in hours and 10ths, into total miles to determine average speed. Finally, divide gallons of gas into total miles traveled for miles per gallon at your average speed."

what you get per gallon"

"That doesn't sound hard, and it'll keep my mother-in-law busy in the back seat filling in data sheets." He was connecting wires to the telephone when he came up with his next question. "What about the *kind* of gasoline you use? Is that important?"

"I don't believe any two gasolines are the same, nor are gasolines of the same brand identical in separate cities of different climatic conditions. All good gasolines are blended to operate best at the altitude and average seasonal temperature of the city in which they are sold."

We take a few moments out to check the location of the phone extension. I argue that I want it higher, he wins, then asks, "What about engine oils? Are they all the same?"

It took more than a moment to shift my train of thought from gasoline to oil, but here's what I told him: "A good engine oil does a lot more than just fill the crankcase. Take 10-30 oils. They flow when cold to save wear on the battery during a slow start. As the engine warms the same oil forms to absorb over 3000-pounds-per-square-inch pressure on connecting rod bearings. Besides, there are additives in oils that clean knock-provoking deposits from the combustion chamber and make it possible to keep your engine tuned for maximum performance. In one sense, a good motor oil is the cheapest insurance you can buy to protect the life of your engine."

"Okay, so I assume I can't go too far wrong if I get a top-grade oil. But what about some of these lube jockeys? I hear some of them aren't so hot."

"DON'T FOOL YOURSELF," I answer. Newer cars are so complicated that good lube men *have* to know what they're doing. They have special charts to make sure they check every fitting and use the proper lubricant for each. The next time you're having your car lubed, hang around and see how they do it. Besides, there's something else you can do for your car at the same time."

"What's that?" he says, leaning against the kitchen sink.

"The next time your car's on the rack, examine the brake lines to make sure none are leaking or rubbing against the frame. Check the muffler for cracks or corrosion. Roll the tires and wheels so you can examine every inch of tread. When you find a stone wedged in the tread, pull it out. They can work into a carcass bruise which ruins the tire. Another thing to look for is a differential that's leaking. A mess of grease on the inside of either rear tire calls for the attention of your lube man to check the differential. You may save a set of expensive rear end gears, or prevent a serious accident if oil has been leaking over the rear brake lining."

"Anything else I can do there?"

"Sure. Make sure your air cleaner isn't dirty. A dirty one can cut your gas mileage by as much as 10 per cent because it restricts the flow of fresh air. This causes the engine to run rich—like the choke is half closed. Dirty spark plugs can rob you of as much as one gallon of gas in every 10. Believe me, George, cleaning air cleaners and regapping plugs every 5000 miles is often paid for by savings in gasoline."

I CAN SEE THAT I'M BEGINNING to make an impression, so I drive my next point home. "How would you like to save another \$13 or so a year?" And before he gets his answer out, I continue, "You can do this by maintaining factory-recommended tire pressures. Engineers tell me that tires that are five pounds under-inflated can cost you one gallon of gas in every 20. To 10,000-mile-per-year drivers this is another 42 gallons of gas. Multiplied by 32c, this adds up to \$13."

"Well then, if you can get better mileage by running more air, why not get them up real high?"

"I thought you'd ask that. You want to keep *at* the recommended pressure because over-inflation can make your tires wear out faster, and what you might have gained by better mileage you've lost in worse tire mileage. The only time when it's good to add pressure to your tires is before a long trip when you're carrying extra

passengers and a trunk stuffed with luggage. Put a couple of pounds extra in each tire; the additional air helps support the stresses of the added weight and gives a better handling car at road speeds."

By now George is almost finished with the phone installation and begins to put away his tools. He looks up and asks, "As long as we're saving all this money, how about using some of these gadgets that are 'guaranteed' to give better mileage? You know—the things that look like spark plugs, but aren't. Carburetors with just a few parts that work miracles. And whirlygigs that somehow give you twice the mileage you're getting now—no matter how much that is?"

THOUGH GEORGE WAS PRETTY SERIOUS, I couldn't help but laugh to myself at the thought of all the "Georges" in this country who believe that these gadgets will save them pots full of dough. "Advertising claims to the contrary," I say out loud, "there's no practical means of getting 70 or 80 miles from a gallon of gasoline. Gasoline has tremendous potential energy, but the best engines made use only 10 per cent of the latent power in motor fuel during normal running conditions."

"What happens to the other 90 per cent?" George wants to know. "My gas tank doesn't leak."

"The remaining 90 per cent of gasoline's energy escapes as exhaust gas, passes into coolant as heat or is wasted in overcoming resistance of tires and wind. A good example of this was reported by the Ethyl people, who told me of a full-size car capable of 149 miles to the gallon."

"You're joking!"

"Nope. What they did was pump tires to 150 pounds, put light oil in the transmission, take the fan belt off and advance ignition timing as far as they could. To get maximum mileage the driver held the throttle wide open until the car accelerated to 20 miles an hour, then put in the clutch and killed the engine. The car coasted down to five miles an hour before the driver would start the engine and begin the procedure all over again—alternately accelerating, killing the engine and coasting. The only thing I want to know from you, George, is: 'Would you drive 50 miles this way?'"

He didn't have to think twice on this one. "You just know I wouldn't! That kind of driving would drive anyone out of his mind."

"It's all in getting used to it—or any way of driving for that matter. That's why I want to warn you not to expect too much from my suggestions."

George stops in the middle of writing in his report book and exclaims, "Well, I'll be darned! You've just been kidding me all along."

"Not at all. I only want you to remember to have fun from a car, and not to expect 36 mpg from a 300-horse Ajax Eight. It can't be done, but you can expect better mileage—if you just work at it."

WE HAD BEEN TALKING for almost an hour, which was more than legitimate time for installation of one extension. George stood up, stretched, and stuck out his hand. "You know, Bill, I think I learned something from your comments on this economy kick. Thanks a lot. Now I suppose I'll go out, get in the truck and drive just like always. But now I at least know what I *should* be doing."

We shook and walked to the front door so I could let him out. Then I stood listening. The truck door slammed, the engine came to life before an echo of the slam died away, gears clashed as they hurriedly meshed and George's truck zoomed up the street gobbling gasoline every foot of the way.

I couldn't help but think of the wise old engineer who told me, "Economy is more than what you get per gallon. It's really a matter of all-around driving interest and skill."

/MT

Hill's Win at Le Mans

continued from page 34

Mulsanne the ZF differential started groaning. But Tavone, tall and gimlet-eyed Ferrari staff man in charge of the signalling post just after the corner, spotted that a rear tire was deflating and telephoned through to warn the pit crew. By the time Phil pulled in badly worried at the end of his first lap they were ready with a spare wheel.

Then a real pantomime started at the Ferrari pit. Phil, who had read the regulations as a good driver should, knew that the spare wheel carried on the car must be used for the first wheel change, just to prove that it is present and accessible. In vain he harangued the mechanics, throwing at them the whole of his Italian vocabulary and making frantic gestures. They ignored him and went on hammering. The new wheel was on before he managed to make his point, and the commissaire, with typical French logic, then allowed the car's spare wheel to be ceremonially pulled out and replaced in token compliance with the regulation.

CORRECT CHOICE OF CO-DRIVER is an important factor in planning for success in a 24-hour race and I wanted to know how the winning partnership of 1958 came together. "We had already driven together in long-distance events," said Phil. "We shared a 3½-liter Ferrari in the 1956 1000 kilometers at Buenos Aires and finished second after losing nine

"At the end of the straight I'd lift as I got to the 7-km post—about 600 meters from the Mulsanne corner—and just dab the brakes. Then I'd change down to third at the earliest possible moment, taking the motor up to 7000 or 7200. I did no real braking before the 300-meter post. Then I came down to second and down again into first for the corner."

The weather helped, for during most of the 24 hours torrents of rain cooled the brake drums and limited the race speeds, but Ferrari had also put a lot of work into brake development. Nobody has yet managed to sell him disc brakes, but he had really improved the endurance of his drum brakes. One car did the Buenos Aires 1000 km and the Targa Florio without a change of linings and then had only used 6mm out of the total 7mm lining thickness. During the Le Mans event Gendebien and Hill used only 2½mm out of 7mm. They would have used more in dry weather but they were no longer in danger of having to stop to fit new shoes, although the Ferrari mechanics have a drill for doing this quite quickly.

MORE THAN USUAL ATTENTION seems to have been given to preparing the cars so that they would last 24 hours instead of taking part in an eight-hour Grand Prix which is apt to end in the dead car park around midnight. The drivers were told to keep down to 7000 rpm as a general rule but the engines were quite capable of standing 7200 rpm for 24 hours if necessary.

As originally geared during practice the cars were 900 revs down and the drive ratio was changed to allow them to use their full potential. After that they could pull 7000 rpm in top up the rise past the pits, down the straight to Mulsanne and on the swoop down to Indianapolis.

At this point Gendebien interjected to ask, "Why is it called Indianapolis?" If he didn't know, there are probably others who are wondering. The answer is that this corner used to have a brick surface rather like that at the Indiana oval, so presumably the nickname dates from 1921 and the exploit of Jimmy Murphy, who was a well-known Indy performer.

The winning car was a Testa Rossa Ferrari as sold to private clients except for the rear-mounted gearbox and de Dion axle. "Normally they have a front-mounted synchromesh gearbox," said Phil, "but this gave trouble at Sebring, so we asked for the old crash-type box mounted at the rear. This meant using a de Dion axle, which weighs more and gives no advantage on the smooth Le Mans asphalt. It also means an extra pair of spur gears in the drivetrain, which consume more power, but we accepted that to ensure reliability. The crash box judders, but it holds."

So with no worries about engine or gearbox they could use the transmission freely to save their brakes, a policy which has proved fatal to Ferrari hopes at Le Mans in the past.

The story of the race has already been told in MOTOR TREND; how Gendebien and Hill found themselves in the lead before four hours had elapsed, how Gendebien lost the lead to Bueb's determined attack in the Jaguar, and then the duel between Hill and Duncan Hamilton after the change of drivers, which ended when the Jaguar dropped back and eventually crashed.

AT THE END OF THE RACE, the driver's impressions are badly jumbled and he finds it difficult to remember exactly when things happened. In retrospect the race consists of long periods of tedium punctuated by short spells of excitement but both Hill and Gendebien had a very clear recollection of the strain of driving 160 mph at night in a down-pour of rain, while other cars threw up a thick curtain of spray which no headlights could penetrate.

"I'd try peering over the windscreen," said Phil "but my goggles got covered in dirt. I changed them, but it was useless, so I tried putting my head right back and sighting over the top of the screen with my eyes screwed up into slits. We were driving so blind that we could hear the small cars before we saw them. And what a fantastic bark those little Panhards had this year! With their twin-cylinder motors and open exhausts they were noisier than any of the big cars."

Which was just as well, when you come to think of it.

They had high praise for the cooperation of the small-car pilots in leaving a clear run for the big stuff, except that some of the D.B. drivers tried to race them into the corners, which made things a bit tricky on a rain-washed surface.

THERE ARE TWO MOMENTS in the race that will probably stick in Phil's memory long after the rest have begun to fade. One came when he was hurtling down the straight during the night, peering desperately through the spray and blackness. He turned cold as he saw two slower cars racing side by side in front of him. There was no time to brake or take avoiding action; he was closing on them far too fast, so he did the only other thing possible—tramped on the gas and passed between them!

Sometime later, he was worried when the brake pedal travel rapidly increased, normally a symptom of worn linings, but in this case it wasn't so. The Ferrari braking system uses a pressurized reservoir to prevent aeration of the fluid in the lines as the level drops. Pedal travel is quickly restored to normal by lifting the piston but a mechanic has to open the hood to do it. Pumping the pedal doesn't help.

For laps on end Hill fought it out with Duncan Hamilton. Duncan was making up time by maximum use of his disc brakes but he could not hold his advantage. One of his fuel pumps was out of action and he was suffering fuel starvation towards the end of the straight, which slowed him down on every lap.

By early Sunday morning the Ferrari had lapped the Jaguar once and was just behind it ready to lap it a second time. Dun-

continued on page 48



CONGRATULATIONS are in order for winners Gendebien (left) and Hill. minutes at the pit with a broken oil pipe. We also did spells of driving with de Portago and Ken Wharton on the Ferrari which placed third in the 1956 1000 kilometers at the Nurburgring." (This was one of those races where there were so many changes of drivers that very few people could remember who had driven which when the checkered flag fell.)

"Main thing was that we found we had the same kind of views on the use and abuse of brakes during a 24-hour race." Many a beautiful friendship has been wrecked when a driver has handed his partner a car with the brakes completely worn out in a long-distance event.

Above all, Phil tried to avoid any sustained braking at really high speed, for if you hold the brakes on at 160 mph the heat input is terribly rapid.

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Hill's Win at Le Mans

continued from page 46

can was still driving hard and was sliding with his usual vigor on the corners. The whole spectacle terrorized Tavone at Mulanne, and he frantically signalled Phil to keep back and give Duncan room for his ballet practice. There was no threat from the rear and there was no point in pressing on into trouble. So long as Phil could keep the Jag in sight the Ferrari would win by a handsome margin. The engine hadn't missed a beat and the car felt fine. About this time on a Sunday morning it is easy to feel that the race is practically over, and relax, but the old hand remembers that there are still eight or nine hours of racing ahead. In that time anything can happen. And it did.

THIS WAS THE SECOND HIGHLIGHT of the race for Phil Hill.

"I was following Duncan and we kept hitting squalls of hail and rain which slowed us down. He was going well, accelerating away from Arnage in third when he ran into a squall on a left-hand bend with a slight hump in the middle. Suddenly a little blue puddle jumper loomed up right in front of him. He braked, but he hadn't a chance. The Jag hit a puddle, which spun it onto the grass. It clouted the bank, flipped and threw its driver out, then spun across the road again in front of me. At one moment it was broadside in front of me and I saw it silhouetted across the road. Then I saw the underside as it flipped and I thought it was going to hit me. I couldn't do much except keep straight on and I saw its front end facing me as I went through.

"Duncan was doing well over 100 mph but it felt like a walking pace after what we had been doing down the straight and I never thought a car could travel so far out of control. I thought it was never going to stop."

Duncan had been hit on the chin and knocked out cold as he left the car. He woke up in the entrance hall of the hospital with a foot-long gash in his leg, some damaged ligaments and multiple contusions.

After that there was nothing to do except keep the Ferrari on the road and keep out of trouble through the alternating rain squalls and bright periods for the long hours that remained until four o'clock on Sunday afternoon.

So an American driver wrote his name in the Golden Book of the 24 HEURES DU MANS. Was he pleased?

"Yes. It is the greatest sportscar race in the world . . . the most famous . . . the most widely publicized . . . the one every driver dreams of winning . . ."

"But do you believe it really is the greatest, apart from the publicity and the tradition?"

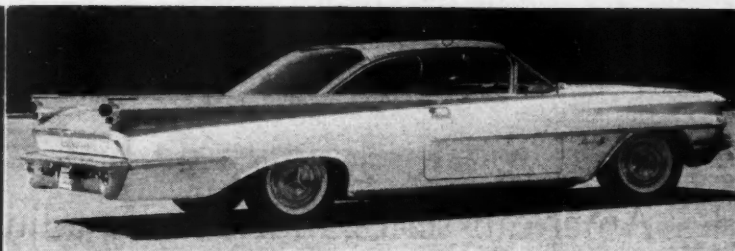
"Yes, I do. But at present speeds it is getting to be rather hard on the drivers. The driving spells need to be arranged so that they can get some real sleep."

And he went away to get some.

/MT

The BATTLE of the MIDDLE BRACKETS

by Bill Callahan
Detroit Editor



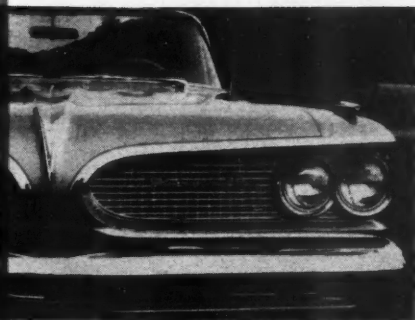
OLDSMOBILE—4th in '58. Still 4th in '59? See page 34.



RAMBLER—7th in '58. Higher in '59? See page 30.



DODGE—9th in '58. Up or down in '59? See page 52.



PONTIAC—6th in '58. 5th in '59? See page 56.

THE BATTLE of the middle brackets promises to be one of the hottest contests in the 1959 automotive year. Based upon their standing in sales at the end of the 1958 model season, rather than price class, those participating in the 1959 scramble will be Olds, which moved from fifth to fourth in 1958; Buick, which wants fourth place back; Pontiac, which maintained its hold on sixth; American Motors, which moved five places up the sales ladder to seventh; Mercury, which dropped from seventh to eighth; and Dodge, which dropped from eighth to ninth. The 1959 Mercury line will not be announced until later this year, while a 1959 Buick road test appeared in October MT, so this discussion will be limited to American Motors, Dodge, Oldsmobile, and Pontiac.

What have they got that makes division heads confident of a higher rung on the ladder in 1959? Olds and Pontiac are both almost completely new. They are longer, much lower, somewhat wider and with completely new styling concepts that probably use about the same amount of chrome as in 1958 but more judiciously applied. Both cars are attractive and, while larger, they appear less cumbersome than in 1958. Dodge has an entirely new grille treatment, new roofline and redesigned fins. In spite of the changes, it bears greater resemblance to 1958 models than is the case with Olds and Pontiac. American Motors' lines—American, Rambler Six, Rambler Rebel V8 and Ambassador—have limited exterior changes.

If you want the biggest package, you'll probably settle for Oldsmobile. Its 98 has an overall length of 223 inches, a wheelbase of 126.3 inches, and a width of 80.5 inches. For compactness, you'd settle for one of the American Motors' cars. The largest of these is the Ambassador, with an overall length 23 inches shorter than the Olds, while the

American is 45 inches shorter! AMC cars are but 73 inches wide. If lowness is what you want, select the Olds at 53.5 inches, as versus Dodge's 54.3, Pontiac's 54.6, and the AMC cars' 57.5.

If it's power you want, Olds has the edge. The hottest engine—in the Super 88 and 98—churns up 315 horses. At the same price in the Pontiac line you can take your choice of a hot engine or an economy engine: the most powerful stock engine (with two-barrel carb) gives 280 horsepower, while the economy engine gives 245 on regular gas. If it's a six you want, you can get that as an option from Dodge or American Motors.

In the choice of transmissions, you can have either standard synchromesh or automatic, but overdrive is available only on the American Motors' cars. This year an automatic transmission is available even on the Rambler American.

If you're sold on air springs, you can get those on any of the four cars, though American Motors' cars and Pontiacs are the only ones on which you can have them installed all the way around. If you're more conservative, you can have coils in front and leafs in back (Olds), coils all around (Pontiac and AMC), or torsion bars in front and leafs in the rear (Dodge).

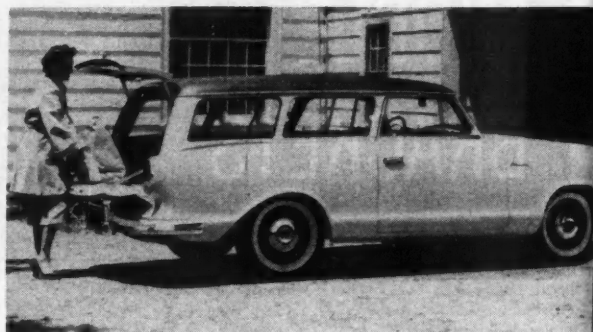
That's a quick comparison of four of the car makes that will be slugging it out for fourth to ninth positions in the 1959 market. Buick's manager, Ed Ragsdale, vows to displace Olds from the fourth spot. Oldsmobile's Jack Wolfram says, "Don't hold your breath till it happens." Pontiac's Semon Knudsen says, "I won't settle for anything less than fifth place nationally." AMC's George Romney will be happy to sell all he can build. Dodge's M. C. Patterson just wants to move up. For more details on each of the cars and how they shape up, turn the page.

AMERICAN MOTORS for '59

offers wider, self-adjusting brakes, a wagon in the American series, individually adjustable front seats with headrests, and a "glass bowl" economy carburetor.



RAMBLER AMERICAN 2-DOOR HARDTOP



RAMBLER AMERICAN STATION WAGON

American Motors is taking a bold step for 1959 by continuing its 100-inch-wheelbase Rambler American series completely without change (except for the addition of a wagon to the line). This is being done to test the theory of its president, George Romney, that U.S. car buyers are fed up with big cars and radical annual model changes.

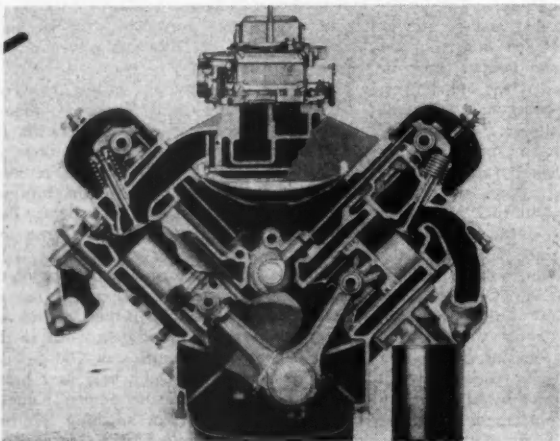
As the 1958 model year ended, AMC had produced 31,000 American models, about 118,000 Rambler Six and Rebel V8 models, and 13,000 Ambassador models. Aside from General Motors and its divisions, AMC was the only car producer in America to show a profit on 1958 operations.

Rambler Six, Rebel V8 and Ambassador models have not been markedly changed, in line with the same thinking that buyers prefer more lasting designs. The rear fin has been extended forward to the center of the car, giving the side of the car a more graceful sweep

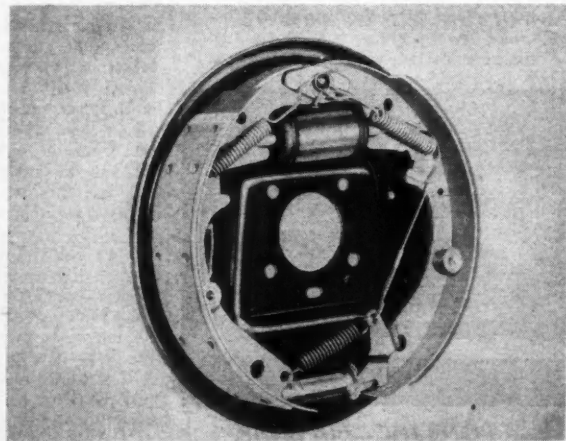
and more unity of design. The front grilles have been redone in the Rambler Six and Rebel series.

A definite innovation in these series is the adoption of individually adjustable front seats which enable the front seat passenger to adjust his seat to the most comfortable position regardless of the position required by the driver. Headrests are also available at extra cost for the back of both front seats. These, in conjunction with the standard reclining seat, enable the front seat passenger to relax completely. They may also prevent neck injury in event of rear end collision. They do not interfere with vision to the rear.

AMC's campaign to fret the oil companies is continued. The ohv Six is now equipped with a new carburetor which is claimed to permit the owner to squeeze 1½ miles per gallon more out of regular-grade fuel. The carburetor has a glass bowl which permits quick checking for float operation or sediment deposits. A dual-throat



RAMBLER AND AMBASSADOR V8 engines for '59 are basically unchanged except that valve train has been fortified to provide longer life and quieter operation.



IMPROVED BRAKES on Rambler Six and Rebel V8 include wider brake shoes, heavier lining and double acting hydraulic cylinders. Self-adjusting brakes are options.



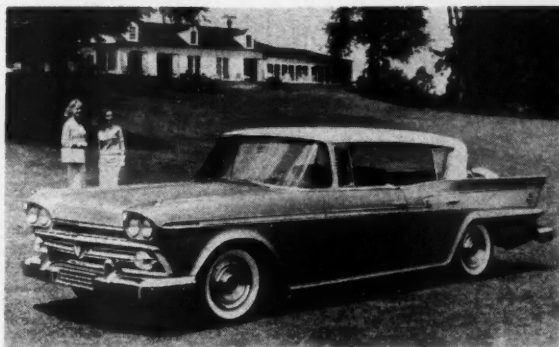
RAMBLER 4-DOOR STATION WAGON



RAMBLER 4-DOOR HARDTOP



AMBASSADOR 4-DOOR STATION WAGON



AMBASSADOR 4-DOOR HARDTOP

carburetor boosts horsepower from 127 to 138 and is available optionally. The Rebel V8 has a four-barrel carburetor. Fuel savings with this engine are accomplished by making available as standard equipment rear axle ratios formerly optional at extra cost. Other ratios are now optional without extra cost.

Pushbutton controls for automatic transmission have been changed on all models to eliminate the key-start. Starting is now done by depressing the NEUTRAL-START button. Control buttons are colored amber for NEUTRAL-START, red for REVERSE and green for DRIVE ranges.

Brakes have been improved by increasing lining thickness. On the V8 models the front brake primary shoe width has been increased from two to 2½ inches. Optional self-adjusting brakes will be available on all Rambler Sixes, as well as on V8s in 1959.

The American will be offered in a two-door sedan and station

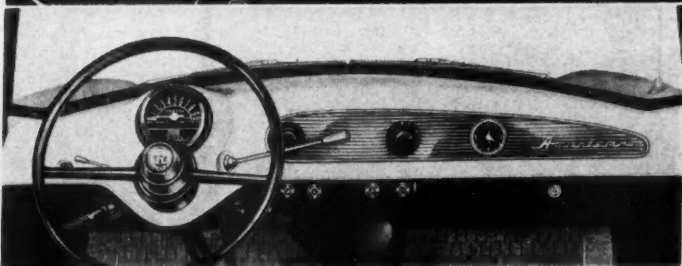
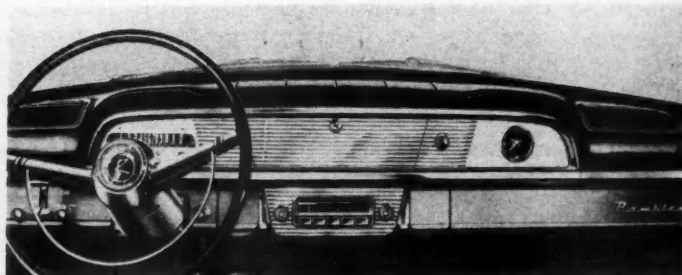
wagon, both on a 100-inch wheelbase. The wagon provides 52 cubic feet of cargo space with the seat down. Front seat in both the sedan and wagon have been modified to provide better headroom. Continental tire carrier, factory installed, is optional on sedan models.

The combined Rambler Six and Rebel V8 offering includes 11 models comprised of sedans, hardtops and station wagons. There are 15 single-tone and 18 two-tone color combinations. All are on the 108-inch wheelbase and are four-door models. Limited-slip differentials will be optional and air ride will be optional in the rear. Power windows, power brakes and power steering also are available.

In the Ambassador series there will be six models, all four-door, including Super sedan and wagon, Custom sedan and hardtop, and a Custom wagon and Custom hardtop wagon. These will all be on the 117-inch wheelbase. A single exhaust system is standard, but dual exhausts are optional on these and Rebel V8 models.

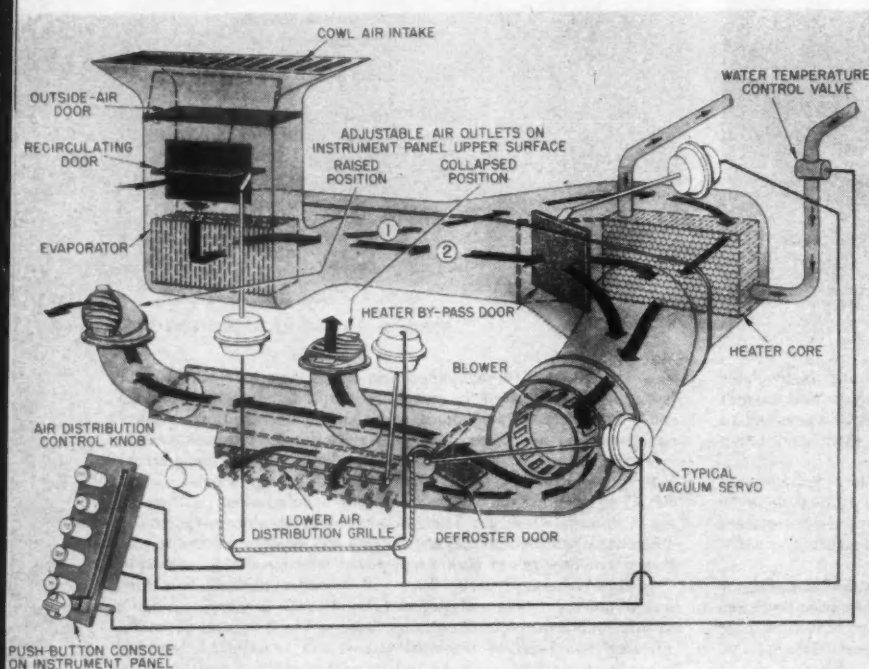


HEADRESTS on individual reclining seats are available on top three AM lines. Right, dashboards of Rambler and Rambler American.



DODGE for '59

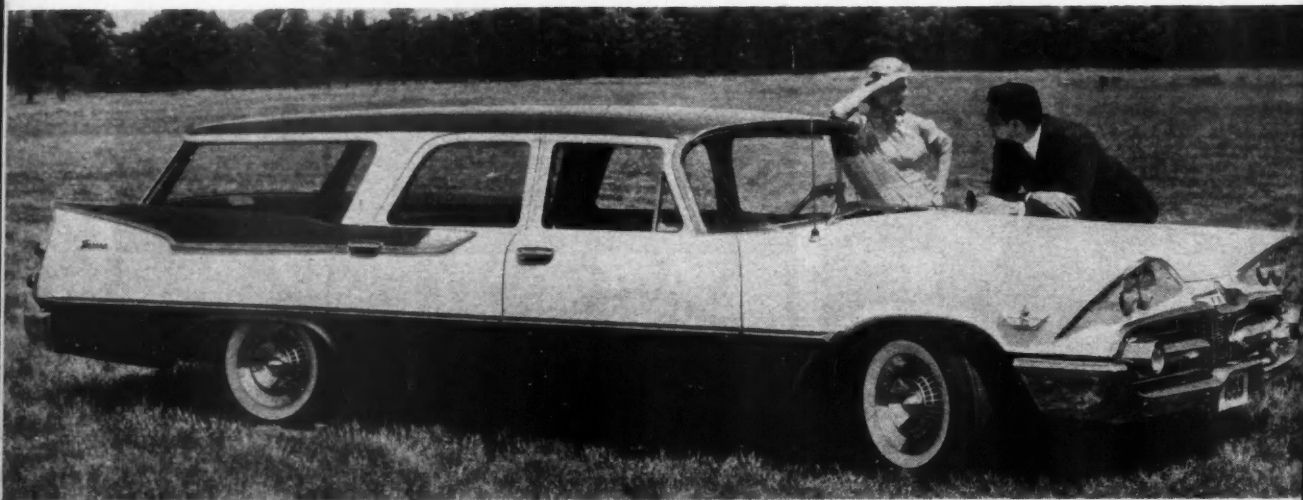
offers swivel seats, rear suspension air assist bags, self-tilting rear view mirror, and a pushbutton heater-air conditioning system.



PUSHBUTTON PANEL controls heater functions with vacuum-actuated servos.

DODGE SHOWS ITS WARES for the 1959 market with considerable overall restyling that distinguishes it from others in the Chrysler line, while sharing many of the interior and optional features. Front fenders, extending beyond the twin headlamps and contoured around them, give the car an arched-eyebrow look. Imported car influence shows itself in the anodized aluminum egg-crate grille behind massive protective horizontal bars with parking lights in their outer ends. Compound curved windshields and rear windows continue to extend farther into thinner tops and increase visibility and headroom. Fins have been slightly restyled, mainly with chrome trim but still have the "added-on" look as in the '58s. Dual tail lights extend well beyond the rear fender line and are housed in tapered chrome tubes.

Interiors offer an array of colors and fabrics. Swivel seats, "joy stick" control fender mirror, electronic rear mirror, and automatic headlight dimmer are options shared with the entire Chrysler line. Of special interest to the driver is the new oval steering wheel. It is slightly flattened at the top to give better visibility over the cowl and slightly more legroom. The speedometer dial has given way to a colored bar that shows colors according to speed. A green zone covers speeds from 0 to 30, amber from 30 to 50, and red over 50 miles per hour. Color-blind drivers, beware!





CUSTOM ROYAL CONVERTIBLE

Coronet, Royal, Custom Royal, and Sierra models offer 14 body styles, including station wagons. Two-door and four-door sedans and hardtops, two convertibles, and two four-door station wagons, with six- or nine-passenger options are included in the line, and all are on a 122-inch wheelbase.

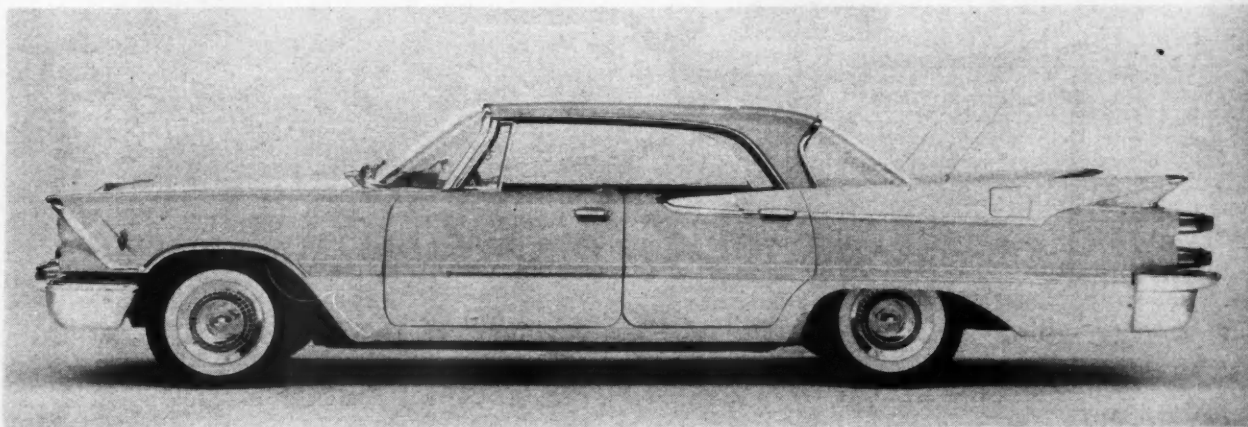
Under the hood of the Coronet is an economy six-cylinder engine of 230 cubic inches and 135 horsepower. The Coronet V8 has the popular Red Ram 326-cubic-inch engine producing 326 hp, and the 361-cubic-inch is available at 295 hp for Royal and Sierra series with a 305-hp option for Custom Royal, Custom Sierra, and convertibles. Optionally available for all Dodge models is the D-500, 383-cubic-inch 345-hp engine. All engines this year are using wedge-shaped combustion chambers instead of the polyspherical and hemispherical designs.

Torsion bar front suspension, improved with shorter bars, and cam-adjusting front wheel alignment make up the Dodge chassis changes for 1959. Air assist on the rear only is again a valuable option for leveling, especially with the increased load-carrying capabilities of all the models.

TorqueFlite and PowerFlite automatic transmissions have water-cooling for more consistent performance, and pushbutton controls for these two drives have been continued with the button panel located on the left-hand side of the dash.



FOLDING ARM REST creates comfortable seat for extra front passenger.



CUSTOM ROYAL 4-DOOR HARDTOP

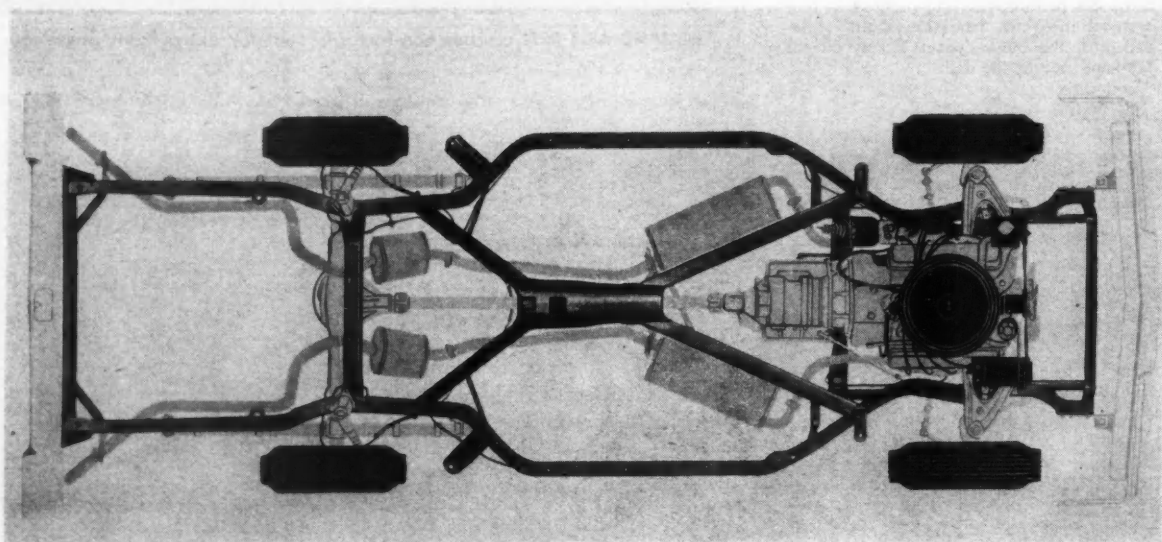
←CUSTOM SIERRA 9-PASSENGER STATION WAGON

OLDSMOBILE for '59

offers longer and wider bodies, bigger and flanged brakes, more sensitive power steering, and a choice of two improved engines.



SUPER 88 HOLIDAY SPORTSEDAN



BULGING SIDE RAILS and X-type crossmember provide a heavy but very rigid frame. Main body bolts directly to top of rails and to inboard brackets to produce less vibration. Resonators are used on dual exhaust system.

FLANGED BRAKE DRUM steers cooling air across entire surface and reduces brake fade through better cooling.

SCENICOUPE, HOLIDAY AND FIESTA are some of the fascinating names that Oldsmobile has conjured up for their equally fascinating line of 1959 automobiles. Completely restyled, and with two new body types added to each of the series, luxury is available in large doses.

The magic wand of the stylists has wiped out much of the chrome, wrapped the glass farther around front, sides and top, created thinner rooflines, carried the straight-line theme along the length of the body with projectile-like booms extending from front fender to rear of car, and might well have revolutionized dual headlighting with a new spacing arrangement.

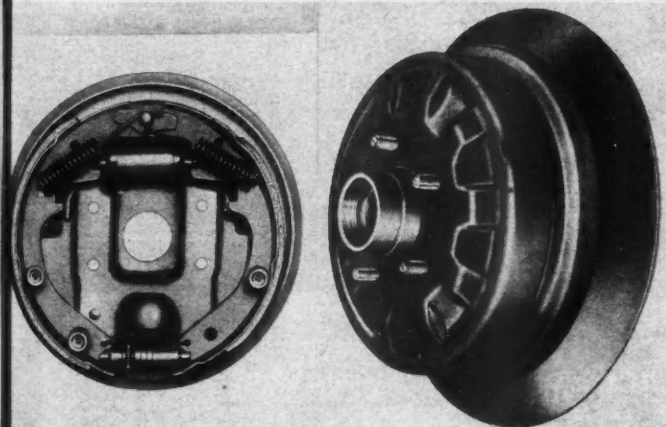
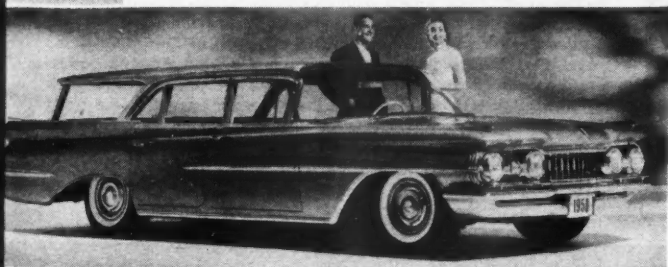
According to Olds stylists, comfort is synonymous with luxury, and they have carried this throughout the interiors with well-fitting seats, increased head-, leg-, and hiproom. Best of all, they have made their large compound rear windows with a special glass that is claimed to absorb about 85 per cent of the sun's heat. Special headliners and a trend toward lighter colors for roofs will make cars cooler, and optional air conditioning units more efficient. In addition, new fabrics—some synthetic—are combined with metallic threads and plastic trim that looks like fine leather, into color blends that are more attractive and durable than ever.

A better arrangement between the door opening and the seats makes entrance and exit, both front and rear, just as simple with a top hat or evening dress as with bandana and blue jeans.

ONE OF THE TWO NEW BODY STYLES offered for the coming year and available on the 88, Super 88, and 98 series is the four-door Holiday SportSedan. It represents family-size luxurious transportation with a domestic sportscar design. Double-curved windshield and a thin roofline overhanging a wrap-around rear window, combine with the long low beltline to give the car a rakish appearance.

Brand new to the 1959 line is the Scenicoupe, another sporty utility car that serves the need for a distinctive two-door. Like all the Oldsmobiles for the coming year, this one has the luxury features emphasized in all the new models. To complete the available selection of sedans, coupes and convertibles, a name dropped earlier, the Fiesta, represents a station wagon series almost too

SUPER 88 FIESTA STATION WAGON



beautiful to be called a wagon. Converting instantly to a cargo carrier, the two- or three-seat Fiesta is just as acceptable as a distinctive passenger car.

Dual headlighting, spaced wider in a horizontal line, leaves plenty of room for a parking light between the road lamps. Individual styling of the tail lights distinguish the 88 series from the 98s. Those wider-spaced headlamps may start a trend toward bar-type illumination clear across the front of future automobiles. Some of the plaster models we saw showed evidence of this.

UNIT BODY CONSTRUCTION used generally by GM is so strong, we wonder at the great strength of the Olds frame. Combining X-type and bulging square section siderails with husky crossmembers produces just about the strongest frame in the industry. Coil springs support the front suspension and the rear axle is hung on semi-elliptical leaves. New-Matic Ride air suspension is an optional item available for rear end only. As its main feature is leveling, which is very important with the increased carrying capacity of all the line, including wagons, there is little reason to clutter front suspensions with extra mechanical items, such as air bags.

Two engines, the 371-cubic-inch, 270-hp, used in the 88 series, and the 394-cubic-inch, 315-hp engine for the 98 are both running a premium gas 9.75 compression ratio. Slight cam contour changes and better breathing and exhaust have made both of these engines crisp in their response to the throttle. A milder version of the 371-cubic-inch engine runs the same compression ratio but employs a two-barrel carburetor instead of the four-barrel and produces 270 hp. This is the standard engine for the Dynamic 88. These engines will probably burn more fuel but will do it more efficiently, so that a light throttle foot, except when extra bursts of speed are needed, should give about the same gas mileage as the '58s. Higher rear axle ratios available with Hydra-Matic four-speed transmissions should produce better fuel mileage than those offered with the stick shift three-speed gearbox despite the extra power consumed by hydro-type drives.

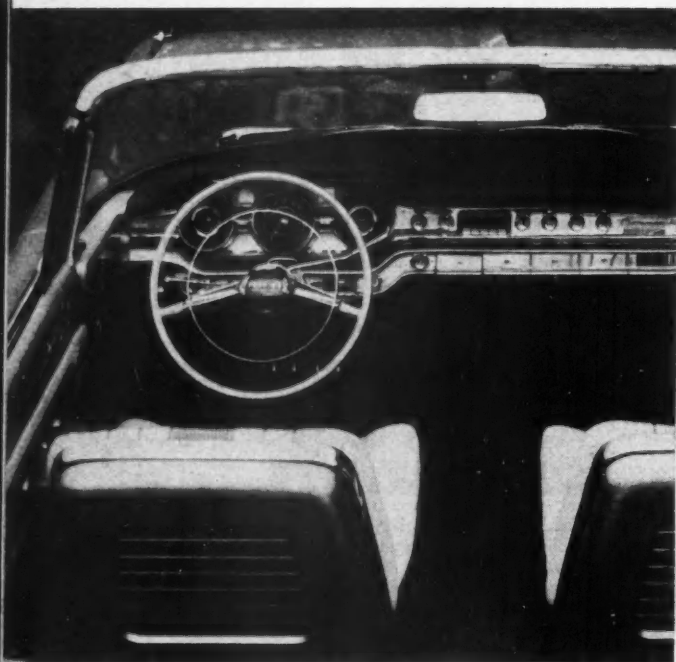
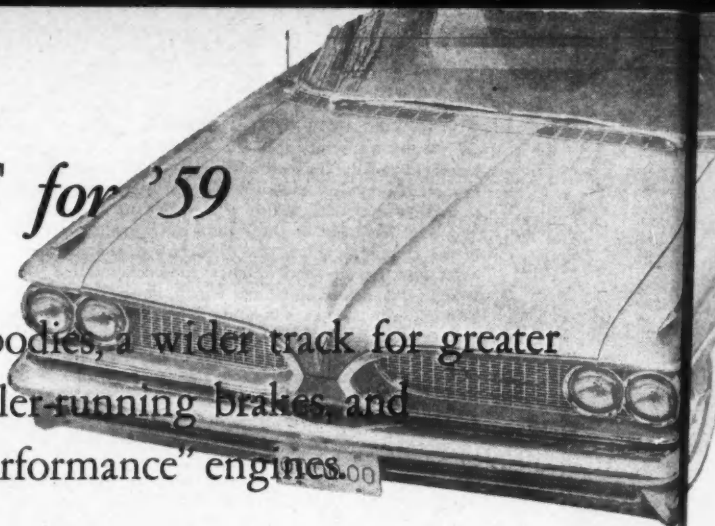
ANYONE FORTUNATE ENOUGH to become the owner of a 1959 Oldsmobile will notice the engineering effort that has gone into protecting this piece of machinery. We are not speaking of crash pads or bumpers, but brakes and steering. To meet the requirements for adequate braking in the face of higher speeds and weights, Oldsmobile engineers created a substantial increase in effective braking area, a method of cooling—plus a self-adjusting feature and better hydraulic cylinders. A flange extending into the airstream under the car adds 88 square inches of cooling area to the drum and scoops air past it to keep the 191 square inches of lining area at maximum efficiency. The ability of the drums to dissipate heat more rapidly should reduce brake fade and increase lining life.

Changing the direction of more than two tons of moving vehicle or just turning the front wheels to park have become quite a mechanical problem. Engineers, taking advantage of some of the engine horsepower, have diverted it to hydraulic pumps, providing power with pressure rather than rotary motion. This type of pressure power can be controlled merely by turning a valve, which, with the proper leverage, is effortless. This becomes a rather delicate steering operation, for if some sort of "feel" is not present or the valving is sluggish, control is difficult.

A NEW ROTARY VALVE power steering unit, developed for the 1959 Oldsmobile, eliminates the friction and lost motion of conventional sliding valves in common use. High sensitivity without lost motion provides precision without effort, and self-adjusting features keep the unit operating "like new," regardless of wear. Maximum effort with the car standing still is only 2¾ pounds. A minimum of two degrees free play makes highway driving a new thrill and gives the driver a feeling that his steering wheel is really connected to the front wheels.

PONTIAC for '59

offers completely new bodies, a wider track for greater stability, bigger and cooler-running brakes, and both "economy" and "performance" engines.



PONTIAC FOR '59 has come up with a package that will be difficult to overlook in the marketplace. It is an entirely new car in styling concept and design. Its style is so well integrated that every feature just seems to "belong" where it is. An odd fact is that while the car is bigger, it looks leaner than the '58 model.

Looks alone are not its sole bid. In the handling department the car deserves rather high marks. A factor that contributes to this is the exceptionally wide tread front and rear. The front wheels (mounted on coil springs) have been spread apart to a full 63.7 inches and the rear wheels (also on coils, with air optional), a full 64 inches. This outboarding results in very good stability on turns, while still providing soft riding qualities on straights. We found this out a few months back when we drove the Bonneville at GM Proving Grounds in Milford, Mich. The widening of tread also lowers the center of gravity of a car that is low to start with; still, road clearance is six inches. Possibly the length and width accentuate the lowness, but the car is only 54.6 inches high.

The new rotary valve power steering used for 1959 gives the driver a better "feel of the wheel," yet the wheels return to straight-ahead position when the steering wheel is released. The gearing is such that the driver can control the car in event of power failure.

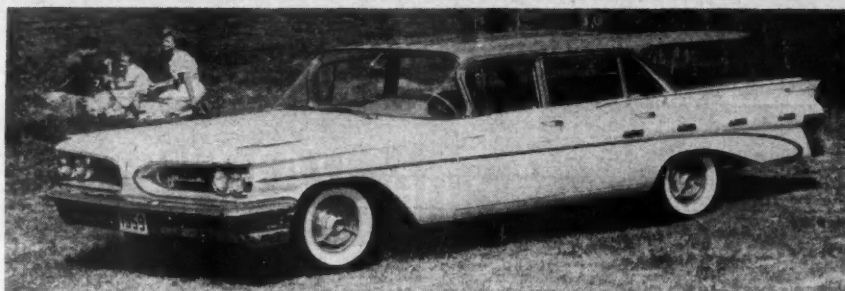
Another unseen improvement are the brakes, with a lining area 10 per cent more than in 1958 and heavier drums with cooling flanges on the front wheels. The drums are moved inboard from the wheels to permit better airflow and cooling. The linkage ratios give lighter feel. We found them quite satisfactory in our initial tests.

In the engine department Pontiac offers a wide array of power-building equipment that uses the same basic 389-cubic-inch block (370 in 1958). For instance, the stock engine offered in the Catalina and Star Chief will have a 10 to 1 compression ratio and two-

DEEP ROLLED EDGES improve front seating on Bonneville.



**BONNEVILLE SAFARI
4-DOOR STATION WAGON**



BONNEVILLE VISTA 4-DOOR HARDTOP

barrel carburetor. This will turn up 280 hp at 4400 rpm and 408 pounds-feet of torque at 2800. However (and here's a switch), the same engine with 8.6 to 1 compression, a milder cam and special manifold will be available at no extra cost for owners seeking fuel economy (up to 10 per cent savings on regular gas).

By making the de-tuned engine available as an option rather than the other way around, Pontiac hopes to determine how real the demand is for economy as against performance. At present they are setting up to meet a 10 per cent demand for optional engines but can increase this to 50 per cent, if needed. Pontiac's highest performance engine would be the Tempest 420-A, with three two-barrel carbs and 10.5 to 1 compression. It turns up 345 hp at 4800 and delivers 425 pounds-feet of torque at 3200.

Synchromesh transmission and Hydra-Matic are optional on all models. There is no overdrive.

Series designations for '59 include the Catalina, Star Chief, and Bonneville. The "bread-and-butter" Catalina (priced just above the Chevy Impala and intended to compete with it) is on a 122-inch wheelbase, and is almost 18 feet long. (The body styles are shown in the comparison table on page 58.) Both the Star Chief and Bonneville are mounted on a two-inch-longer wheelbase and are 10 inches longer than the Catalina.

If you want to be quick on the trigger with identification of the various series, remember this: the "fastback" (sloping rear window), lack of chrome and relatively small tail lights are the distinguishing features of the Catalina series; the Star Chief uses the "fastback" only in its sedans, has large tail lights, and four "stars" spread out along the rear quarter panel; the hardtops with "panoramic" rear windows, convertibles and wagons with simulated vents along the rear quarter panel are the Bonneville.

Throughout the entire line, front and rear legroom, hip- and shoulder room have been increased (see comparison table). Front seating in the Bonneville has also been greatly improved by deeper rolled edges at the sides of the seat and seatback, which now hold occupants more firmly in place.

Interiors use an excellent blending of colors and fabrics. The instruments are well grouped and easy to read. The speedometer can be set for any desired speed above 15 miles per hour and both visual and audible warnings are given when that speed has been reached.

Coupled with the brightly contrasting interiors, the acrylic lacquer finish used on all GM cars this year adds a new note of brilliance. The '59 Pontiac will be offered in 15 solid colors and 42 recommended two-tone combinations.



STAR CHIEF 4-DOOR SEDAN

← **REAR OF BONNEVILLE VISTA**

The BATTLE of STATISTICS in the MIDDLE BRACKETS

	AMERICAN MOTORS					DODGE					OLDSMOBILE					PONTIAC				
BODY STYLES	American: 2-D sed., sta. wag. Ambassador V8: 4-D sed., sta. wag., hdtip. & hdtip. wag. Rambler: 4-D sed., sta. wag., hdtip.					Coronet 6: 2-D sed., hdtip.; 4-D sed. Coronet V8: 2-D sed., hdtip., conv.; 4-D sed., hdtip. Royal: 2-D hdtip.; 4-D sed., hdtip. Custom Royal: 2-D hdtip., conv.; 4-D sed., hdtip. Sta. Wag.: 4-D 2-seat, 4-D 3-seat.					Dynamic 88: 2-D sed., hdtip., cpe., conv.; 4-D sed., sta. wag. Super 88: 2-D hdtip., cpe., conv.; 4-D sed., sta. wag. 98: 2-D cpe., conv.; 4-D sed., hdtip.					Catalina: 2-D spts. sed., cpe., conv. cpe.; 4-D sed., sta. wag., hdtip. Star Chief: 2-D spts. sed.; 4-D sed., hdtip. Bonneville: 2-D hdtip., cpe., conv.; 4-D hdtip., sta. wag.				
ENGINE	Cu. in.	C.R.	Carb.	HP		Cu. in.	C.R.	Carb.	HP		Cu. in.	C.R.	Carb.	HP		Cu. in.	C.R.	Carb.	HP	
6-cyl.	195.6 195.6	8.0 8.7	1-bbl. 2-bbl.	90 138		230	8.0	1-bbl.	135		Not available					Not available				
V8	250 327	8.7 9.7	4-bbl. 4-bbl.	215 270		326 361 361 383 383	9.2 10.1 10.1 10.0 10.0	2-bbl. 2-bbl. 4-bbl. 4-bbl. 2 4-bbl.	255 295 305 320 345		371 394	9.75 9.75	2-bbl. 4-bbl.	270 315		389 389 389 389 389 389 389	8.6 8.6 8.6 10.0 10.5 10.5 10.5	2-bbl. 2-bbl. 4-bbl. 2-bbl. 3 2-bbl. 4-bbl. 3 2-bbl.	215 245 260 280 300 315 330 345	
TRANSMISSIONS																				
Manual	3-speed (overdrive optional)					3-speed					3-speed					3-speed				
Automatic	Flash-O-Matic 3-speed					PowerFlite 2-speed TorqueFlite 3-speed					Hydra-Matic 4-speed					Hydra-Matic 4-speed				
AXLE RATIOS																				
Manual	3.31, 3.78, 4.11, 3.54, 4.10, 4.38, 4.44					3.73, 3.54					3.64					3.23				
Automatic	2.87, 3.15, 3.31, 3.78					3.31, 2.93, 3.73					3.07, 3.23, 3.42					3.08				
WHEELS	14- and 15-inch					14-inch					14-inch					14-inch				
BRAKES	139.5, 150.1, 167.5 sq. in.					207, 230 sq. in. Power opt.					191 sq. in. Power opt.					191 sq. in. Power opt.				
SUSPENSION																				
Front	Coil					Torsion bars, air level opt.					Coil					Coil, air bag optional				
Rear	Semi-elliptic (American) Coil (Ambassador and Rebel)					Leaf, air level opt.					Leaf, air bag optional (rear only)					Coil, air bag optional				
STEERING																				
Mechanical	NA					Worm and roller					Mechanical and power— Saginaw worm and roller					Recirculating ball				
Power	NA					Rack and sector (opt.)										Recirculating ball				
INTERIORS	Front	Rear				Front	Rear				Front	Rear				Front	Rear			
Headroom	35.2-36.5		35-36			34-36		34-35			NA		NA			32.8-34.8		NA		
Legroom	43-44		37.5-40			46		37-43			NA		NA			44.8		NA		
Hiproom	58-60		45.3-60.1			63		56-63			NA		NA			65.4		NA		
WEIGHT	2475 to 3692 lbs.					4231 to 4593 lbs.					4231 to 4593 lbs.					NA				
WHEELBASE	100, 108, 117					122					123, 126.3					122, 124				
TREAD	54.6, 57.8, 58.8 (F) 55, 58, 59.1 (R)					60.9, 61.4 (F) 59.8, 60.2 (R)					61 (F) 61.5 (R)					NA NA				
HEIGHT	Min. 57.3, max. 58					Min. 56, max. 58.6					Min. 53.6, max. 56					Min. 56.8, max. 58.6				
CLEARANCE	NA					5.4					NA					6.6				
WIDTH	72.2, 73					80					80.8					80.7				
LENGTH	178.3, 191.1, 193.6, 200.1, 202.6					217.4					218.4, 223.0					213.7, 220.7				
POWER OPTIONS	NA					Steering, brakes, seats, windows					Steering, brakes, seats, windows					Steering, seats, brakes, windows				
	NA—not announced as of presstime																			

AROUND THE WORLD IN 30 DAYS

A monthly summary
of the latest foreign car news
from our overseas correspondents

CHINA Up to the end of 1957 only one type of truck and not a single passenger car was produced in China. Now the "first Chinese-made top-grade passenger car" is a six-seater sedan produced by No. 1 Motor Vehicle Plant in Changchun. Hongchi is 6th new variety turned out this year. Design took one month to complete. Doors and windows are electrically controlled; car has heat and vent system. Its straight 8 boasts 200 hp.

SWEDEN Numerous detail improvements mark Volvo PV-544 for 1959: larger rear window, redesigned and padded instrument panel, handbrake position relocated to between front seats for better accessibility, improved steering, and four-speed all-synchromesh gearbox (optional). Ribbon-type speedometer has trip indicator. Accelerator is suspended and insulated from vibration. PV-544 also features new combinations of color and upholstery.

FRANCE Renault is driving hard in the export market. Over 40,000 cars were shipped to U.S. by end of July—target for year is 60,000. Renault's American director says he believes it possible to sell 90,000 cars (about 1/4 of company's total). . . . Dauphine this year gets a compression boost to 8 to 1; engine has new ignition with vacuum advance and retard. Dauphine Gordini, with hotter head, four-speed gearbox, now produced at rate of 30 a day; price reduction in France may be reflected here. . . . Following Peugeot-Renault sales agreement last spring, Peugeot hopes to expand its import sales. Citroën and Panhard are linked financially, but lack of a good sales organization is said to be a drawback. . . . Simca distributors in the U.S. intend to fight Chrysler's recent taking over of Simca distribution. Chrysler, which now owns 25 per cent of Simca, is facing law suits from the 10 franchised distributors. They claim, in effect, that the Chrysler-Simca deal is a unilateral agreement which cannot void written and oral contracts already in force between the Simca factory and themselves. Simca Auto Sales Inc., distributor for Southern California, Arizona and part of Nevada, has already filed a damage suit in excess of \$8 million. In a letter to their 75 dealers, they

stated that they "plan to be a Simca distributor for a long time to come." Apparently the nine other distributors concur.

GERMANY Mercedes-Benz dominates scene in Germany this month with news of the 190 Diesel and the 220-SE. 190-D has in-line four with overhead cam and Daimler-Benz combustion chamber. Output is 55 hp at 4000 rpm. Speed in gears is reported to be higher than the 180-D. . . . 220-SE is a version of 220-S, with difference in engine. It is in-line six, but has intermittent injection into carburetor intake ports. Result is reported 12 per cent increase in acceleration over 220-S. Top speed not increased. . . . Volkswagen swings into its 20th year of production with claims of having built nearly 2.5 million cars, achieving 1st place in U.S. imported car sales, and being fourth largest world seller. In 1957, VW's biggest year, 470,589 "people's cars" rolled off the lines. . . . And Lloyd aims its guns on the lucrative market with the announcement of the 1959 Alexander "TS," manufacture of which has just begun. Hp has been raised to 29 by a compression boost from 6.6 to 7.2 to 1, bigger valves and ports. Major exterior modification is new grille.

ENGLAND Events and developments in England indicate no let-up in push to maintain lead in European car production. Rover has announced its Three-Liter as "the most powerful Rover since the war." New car has wrap-around windshield, big glass areas and larger trunk. Front structure carrying engine, steering and front suspension is detachable, insulated from the body by rubber. Transmission is manual four-speed with optional Laycock-de Normanville overdrive, or Borg-Warner fully automatic. Front suspension is new, using wishbones and laminated torsion bars. Brakes are Girling with two trailing shoes at front, and vacuum servo assistance. . . . Hillman reports a boost to 1494cc, with an axle ratio change from 4.78 to 4.55 to 1, reducing engine revs for a given road speed. Clutch is larger, first and reverse gear ratios are changed to bring them closer to other ratios in the box. Externally, new Minx has a new all-chrome grille, side moldings which give a new dividing line for



CHINESE HONGCHI 4-DOOR SEDAN



VOLVO PV-544 FOR 1959

AROUND THE WORLD IN 30 DAYS

continued

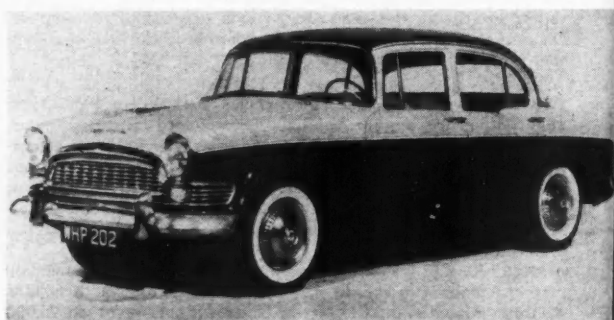


LLOYD ALEXANDER "TS" 2-DOOR SEDAN

ALFA ROMEO GIULIETTA SPRINT COUPE



AUSTIN A-40 SEDAN-WAGON



2.6-LITER HUMBER SUPER SNIPE

BUILD-IT-YOURSELF TYPHOON

Heavy taxes in England are leading to a growing Build-It-Yourself movement, especially among sportscar enthusiasts. Newest idea is the Typhoon, shown here with four occupants. Frame components are low-cost British Ford mechanical parts. Independent front suspension is achieved by cutting the Ford Popular axle, pivoting the two halves at the center and using the normal radius arms in conjunction with Armstrong coil springs and telescopic shocks. Kit is offered without engine, gearbox, driveshaft, rear axle, wheels and brakes. Body consists of 11 moldings in Fiberglas, including floor and front and rear bulkheads. Two versions will be available: a two-seater on an 87-inch wheelbase, and a four-seater similar to prototype (below) on a 97-inch wheelbase.



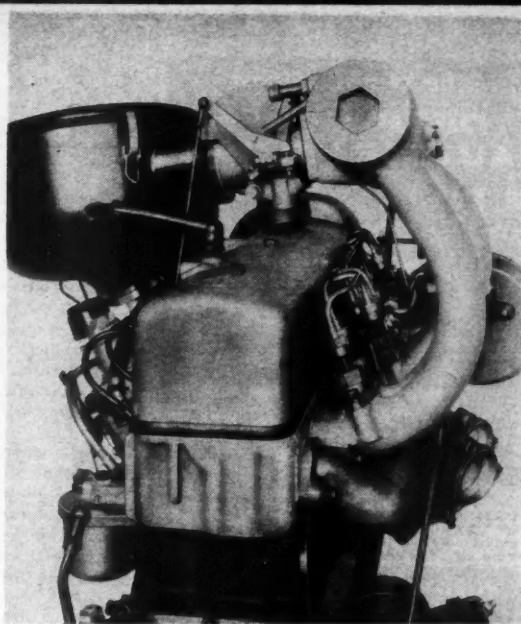
color combinations, new tail lights and trunk lid mounts. Seats and instrument panel have been redesigned. . . . New Austin A-40, body by Farina, is a cross between a sedan and station wagon and features enlarged luggage space with rear seat backrest that folds flat. Powered by the A-35 engine, car is longer, lower and wider and has bigger brakes. Austin agents already carry stocks of spare parts. Running weight, at 1596 pounds dry, is a little above that of the A-35 sedan but below that of two-door Morris Minor and the A-35 station wagon. . . . Humber Super Snipe for next year again adds a luxury sedan to Rootes passenger car range. Basic structure is same as Humber Hawk, which already offers as much passenger and luggage space as any European car. Engine is six-cylinder, 2651cc ohv, delivering 112 hp on a moderate compression ratio of 7.5 to 1. Super Snipe clutch is hydraulically operated, new three-speed gearbox has synchromesh on all ratios. Optional extra is a Laycock-de Normanville overdrive operated on 2nd and 3rd, giving five forward speeds. . . . Look for new Lotus coupe sportscar, expected to overcome objections to current Lotus models competing in Gran Turismo events. . . . Grille, trim, and rear window changes for Ford Anglia and Prefect probably will be disclosed opening day of London Motor Show. . . . Jaguar expected to display new Mark IX sedan with 3.8-liter engine, Dunlop disc brakes, at London Show. Company now offers disc brakes, optional, for 2.4 and 3.4 sedans, supplied only to cars with knock-off wheels. 2.4 available with Borg-Warner gearbox, has same oval grille as 3.4 and XK-150. A few XK-SSs may be in production, handbuilt, toward year-end. . . . Also at show, George Abecassis' latest French Facel Vega sports coupe with V8, 360-hp engine; David Brown, Abecassis' father-in-law, expected to show new Aston-Martin GT with 3.7-liter engine, Superleggera body by Carrozzeria Touring of Milan. . . . Plastic-bodied economy cars in Show will be Opperman Unicar sedan and Frisky Sprint. . . . Vauxhall scotched rumors GM plans to produce Victor in U.S., although exports have zoomed to 3000 a month, a 200 per cent increase over start of program last year. . . . Kieft factory



ROVER 3-LITER SEDAN

now developing new 1100cc Climax-engined sports-racing car with space frame, coil spring independent front and rear suspension.

ITALY Business at Osca has never been so good. Complete year's production of the Maserati brothers sports-racing cars is sold. Latest project is an all-out effort to beat Porsche. Attempt will be made with a new desmodromic-valve engine and an ultra-light car. Osca also toying with open wheel single-seaters for Formula II, one car with rear engine. . . . Strong possibility for next year is for Ferrari to adopt desmodromic valves. Production has ended on their 250 Testa Rossas and all cars are sold, making good used ones valuable. First Ferraris with Dino V6 engines to go on public sale will be 1500cc version. Don't expect two-liter models until 1960.



MERCEDES-BENZ 220-SE FUEL INJECTED ENGINE

SIMCA ARONDE AND ARIANE

The new Simca "sisters" are the Aronde and the Ariane, at right. The Aronde (lower photo) wears two-tone color, a mid-section trimline, accented wrap-around rear window and other manifestations of domestic styling. The larger Ariane (upper photo) also incorporates stateside design features, is powered by a V8 engine of 2.3-liter displacement, or can be obtained at less expense with a four-cylinder 1290cc engine similar to the one used in the different-bodied Aronde. Front seats recline to horizontal position.



TALBOT-LAGO AMERICA

The Talbot-Lago America sports coupe (below), made in Suresnes, France, is scheduled for a 10-cars-per-month distribution on the West Coast. Engine is BMW 2.5-liter V8, developing 125 hp at 5000 rpm, fed by two duplex Zenith carburetors. Built on a tubular steel frame with independent front wheel suspension, the America is luxuriously trimmed with leather upholstery and leathered-covered dash. Rear window is widely curved, and fender hump at rear adds an unusual touch, along with side window treatment. Price is around \$7600.



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CLASSICOMMENTS

by Robert J. Gottlieb Classic Car Editor

YOU NEVER CAN TELL where you will find classic cars or parts. Recently in Oklahoma City I observed a couple of hot rodders towing their dragsters to a meet (page 66). Each trailer was equipped with genuine Bugatti wheels. No doubt Bugatti enthusiasts somewhere in the country are dying to locate these. Oh, well—so it goes.

The association of the Classic Car Club of Southern California and the Classic Car Club of America is now completed. This surprise movement should benefit everyone directly or indirectly connected with our hobby. The Southern California club will be a quasi-regional group.

One of the greatest boons to enthusiasts is the annual swap meet. Most clubs hold one or more meets during the year to permit members to acquire needed parts and sell unwanted parts. At a recent swap meet of the Model T Club at Long Beach, Calif., I saw a Parts Interchange Book change hands for only 50c. This valuable Parts Interchange Book contains numerous lists of parts from one make of vehicle that can be substituted on another. For example, under King Pin Bushings will be a list of all bushings to fit the car in question. You might find six or seven different makes of cars using the same carburetor. You can imagine how much easier it is to look for a part that was used on five or six different makes rather than being restricted to a "front wheel bearing for a '33 Packard."

One reader has asked whether he should pay \$200 for a cherry Darrin-Packard still in the hands of the original purchaser. Of course! Another reader asks whether he should pay \$650 for a rusted LaSalle. Why?

While on the subject of letters, we receive so many that it is impossible to answer but a fraction of them. We again request any reader desiring a personal reply to enclose a self-addressed and stamped (4c now) envelope. Please be brief and phrase the questions in such a manner that the original letter can be returned with check marks indicating the correct answers. As an example: "Is the car classic, semi-classic, special interest, ordinary?" We can check mark the appropriate answer and quickly reply to a letter of this nature.

To the reader who feels hopelessly lost because he cannot buy a battery cable long enough to replace the original 16-foot length: Cable is manufactured in 100-foot lengths, so you can buy a length to meet your needs and then have the connections soldered in place on each end. If you can't obtain the cable in the desired length, bolt together two or three of the longest cables available. With a temporary repair like this thoroughly insulate the connections so that they don't short out.

Every bit as important as condition in determining value of a classic is body style. After many years of pro and con arguments,

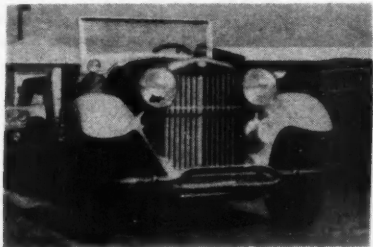
the rule is pretty well established that a sedan or closed car may be classic as well as an open-bodied car, though in some instances an open model is considered classic while a closed car of the same model is non-classic. Investigate carefully before investing more money in a car than it may be worth.

Another general rule is that the closed model (with rare exceptions) is never as desirable as a similar open-bodied model. This preference is reflected in the prices of comparable cars. Throughout the country the average open-bodied car is worth from 40 per cent to double or triple the value of a closed car. There is no doubt about it—owners of sedans and coupes have a much rougher time selling than owners of convertibles.

A prospective Cord enthusiast complains that while driving a front-wheel-drive Cord, more steering wheel pressure is required when accelerating, less when decelerating. He requests a solution to the mechanical problem. There is none—at least as far as the Cord is concerned. This is characteristic of all front-wheel-drive Cords.

Lewis C. Markley of Ardmore, Okla., winner of our "Definition of a Classic Contest," (Nov. '55 MT), writes to tell us:

"In case you and your readers are wondering what happened to the MT Classic Car, I am enclosing these photos, taken after it



came out of the paint shop (my garage).

"The restoration is taking longer than had been anticipated due to limited spare time, but I believe it will be completed within the next year. The color is egg-shell white, which is very close to the original color. The body was found to be in excellent condition and required little repair.

"Most of the plating is done, but I still have the top and upholstery work to do. The car is drivable and still runs well."

The stumper of the month involves transmissions that jump out of gear. Normally this would indicate worn teeth, but in three recently observed instances the gears did not appear to be bad enough to cause this. The transmission grease was removed and the cases refilled with SAE-40 engine oil. In each instance this cured the problem. If you have any thoughts as to why this works, we would like to hear them. This solution is worth a try on any car with a similar defect, providing the transmission does not show a heavy concentration of metal particles in the old grease.

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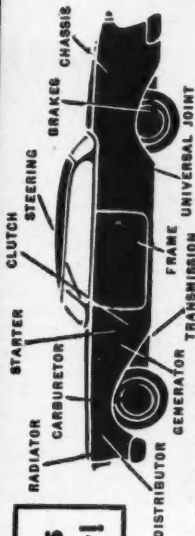
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MT Goes To... BONNEVILLE

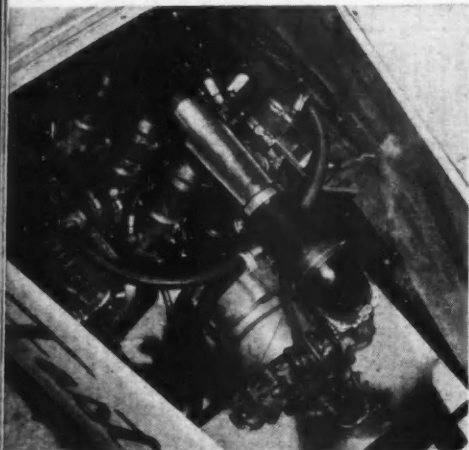


SALT, SUN AND SPEED! That's Bonneville each year during the last week in August. Occasionally, as this year, there is rain too, but it seldom dampens the spirits of the world's most enthusiastic members of the speed fraternity. This was the 10th anniversary of the Southern California Timing Association's National Speed Trials on the salt and it was an outstanding year. Nearly every type of entry broke 200 mph including streamliners, lakesters, modified roadsters, a stock-bodied sedan, competition coupe and amazingly enough, a stock-bodied roadster.

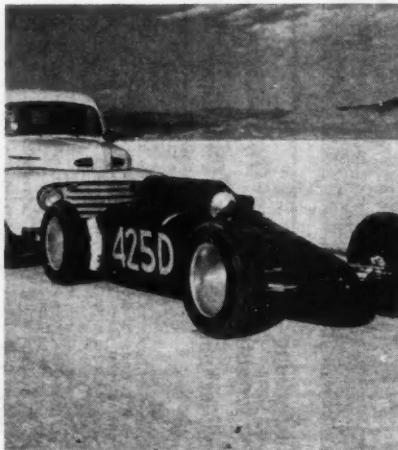
It was the year that two streamliners—Chet Herbert's car and the Mickey Thompson-Fritz Voigt entry—were knocking at the door of the magic 300-mph mark. Neither made it but both have the potential to do it next year.

In an out-of-the-way corner of Utah, the Bonneville Salt Flats are unique in that this is the only place in the free world where such speeds may be attained in relative safety. Combined with the SCTA, a pioneering speed group, Bonneville produces significant results, important engineering-wise to every motorist.

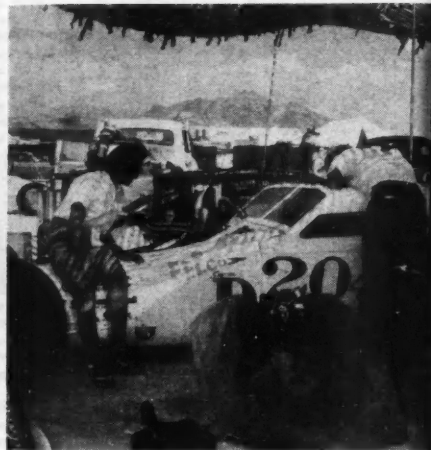
Photos by Bob D'Olive



Superchargers of all types were in abundance. This one, in a Chrysler-powered roadster, is an aircraft cabin pressurizer from a new jet.



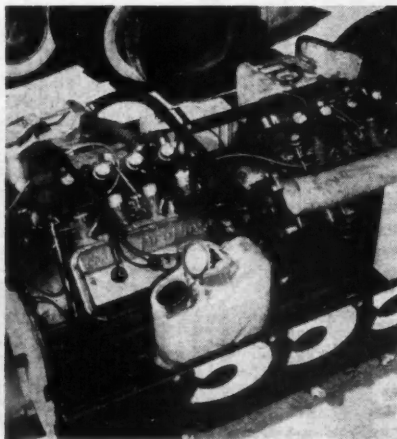
Class D modified roadster of Summers Brothers had blown Chrysler engine, turned blistering 227.12 mph in one-way run and set new record.



Driver of Eelco Special waits in pits under welcome shelter tarp before driving 172.74 mph. Cockpit is in nose; windshield has no function.



Crosley-bodied coupe wasn't fastest on salt but owner Clarence Everett did 127.11, plans to return next year with something new, faster.



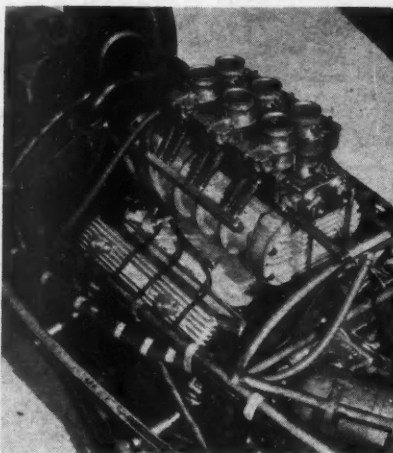
These two Chrysler engines gave Mickey Thompson national championship, two new records—286.852 one way; average of 266.866 mph.



A stock-bodied roadster moves down the salt in a scene which typifies Bonneville's broad expanse. Oil stripes mark course for nine miles.



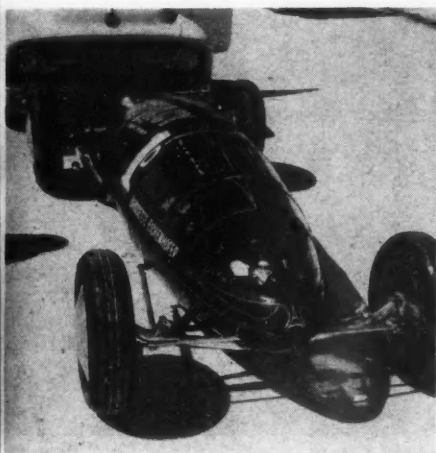
Vesco Dinkins' extremely narrow streamliner did 180.36, was voted the best engineered car.



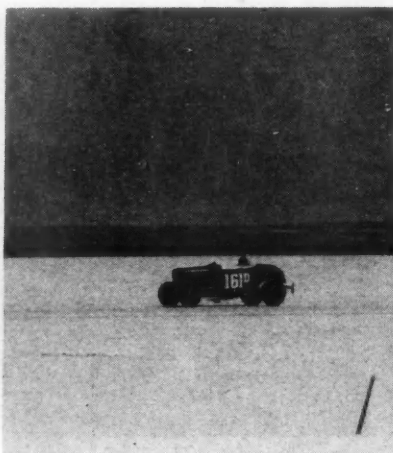
Tom Beatty's blown Olds lakester ran 236.51 mph. In past he has entered flathead engines.



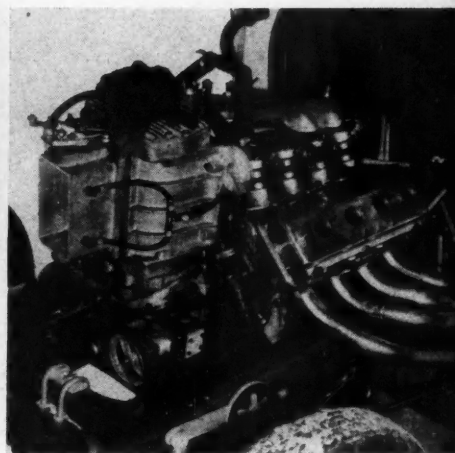
Chrysler engine in Studebaker pushed Kamboor, SanChez, Ansen Special to amazing 210.40 mph.



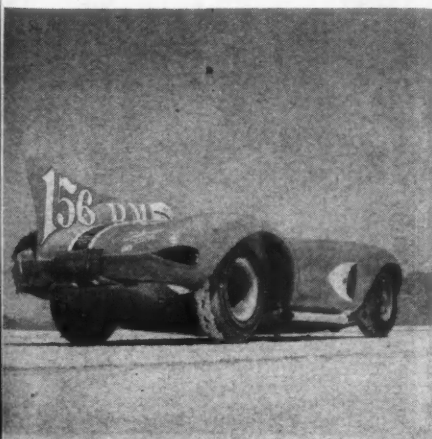
Beautiful example of lakester class car in which driver reclines. This one with supercharged Cadillac turned 239.84 mph, best in class D.



A supercharged DeSoto engine put out enough hp to push this Bakersfield, Calif. stock-bodied roadster to a class record 209.249-mph average.



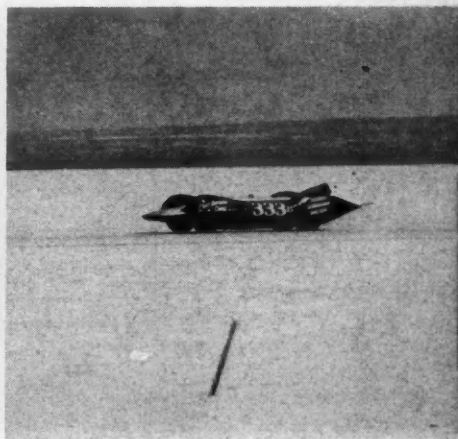
Superchargers appear in strange positions. GMC unit mounted vertically on the Enderle Hardware roadster permits variable ratio gears.



Supercharged Mercury in Teverbaugh and Kirkland's Fiberglas sportscar turned 163.93 mph. Drag parachute was not needed on long course.



Chet Herbert's streamliner carried three Corvette engines displacing 1000 cubic inches, over 1000 hp. Team had prettiest pit member.



Herbert's car flashes through traps at 272.93 mph. Driver Dave Ryder was new to salt and streamliners, did outstanding handling job.

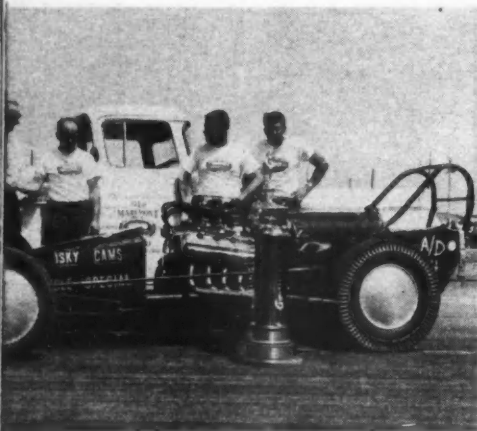


MT Goes To... NATIONAL DRAGS

IMAGINE 500 HIGHLY MODIFIED automobiles gathered together for one purpose—accelerating at the quickest possible rate from a standing start to the end of a quarter-mile dragstrip. Sounds incredible but that was the number of entrants at the fourth annual National Championship Drag Races in Oklahoma City this year. Ending on Labor Day, four days of speed sponsored by the National Hot Rod Association brought together an eye-opening collection of machinery in 25 classes. Only a few cars there were suited for street use; most were single purpose machines—weird and wonderful—displaying the amazing ingenuity of their builders.

Most spectacular at any drag meet are the dragsters—strictly a development of this popular sport. Over 100 were entered this year, largest group ever assembled. They are little more than frame rails with engines and drivers mounted well aft.

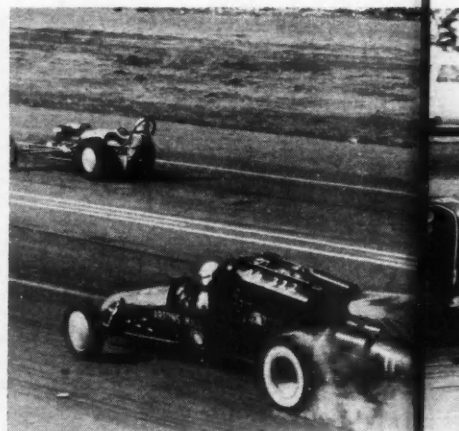
Here are a few highlights of the 1958 Nationals. Our only regret is that we can't include the heartbeat of the drags—the ear-splitting noise and blazing acceleration.



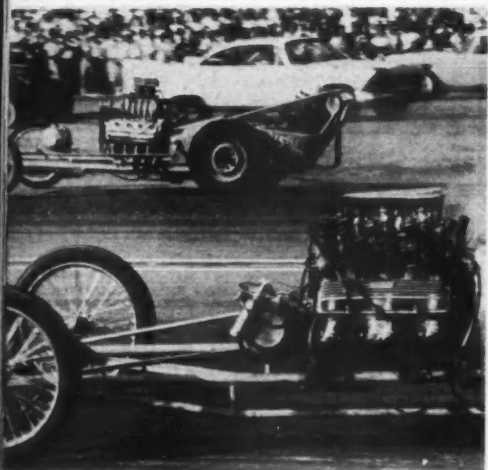
Sam Steed, left, awards Moremont truck and Champion Spark Plug trophy to top eliminator Ted Cyr, partners B. Hopper and J. Dunsmore.



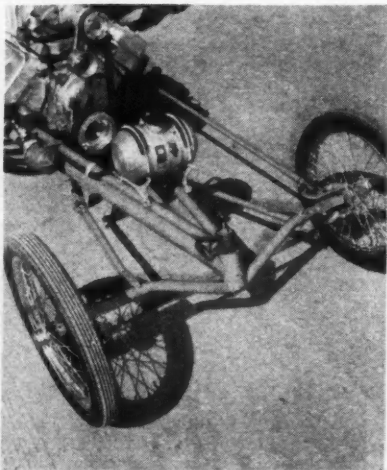
Modified roadster appears driverless, actually conceals pilot Don Mitchell under hood with engine in cockpit. Vision is through grille.



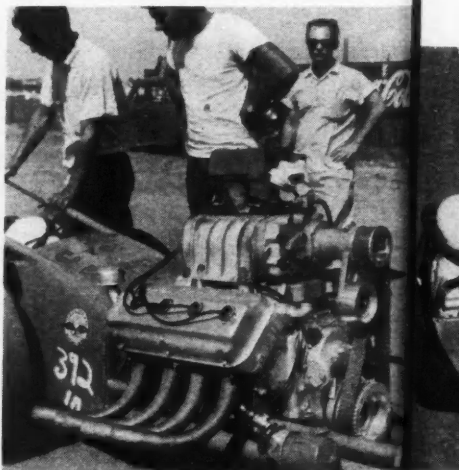
Art Arfons' 1710-cubic-inch Allison-engined Green Monster gets slow start, posted top speed of the meet—156.25 mph and 9.98 seconds E.T.



Howard Cam dragster, near side, has twin Chevy engines, is running against Cyr and Hopper's blown Chrysler which had best E.T.



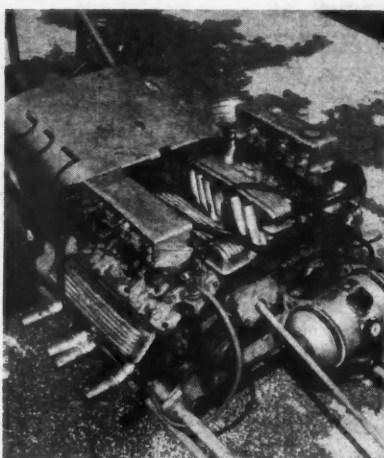
Front suspension of best E.T. car (9.56 seconds) appears fragile and spidery, actually combines light weight, strength and ease of handling.



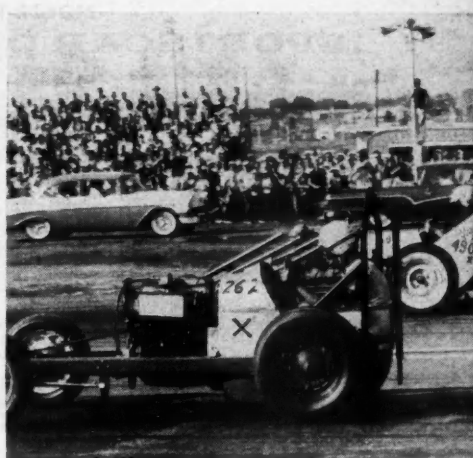
Belt driven GMC blower on '58 Chrysler pushed Cyr and Hopper's new dragster to elapsed time record. Their other entry was top eliminator.



Class X dragsters (four-cylinder engines) were joined by this unusual entry named Jeet with '49 Jeep mill. Owner is Oklahoma Jeep dealer.



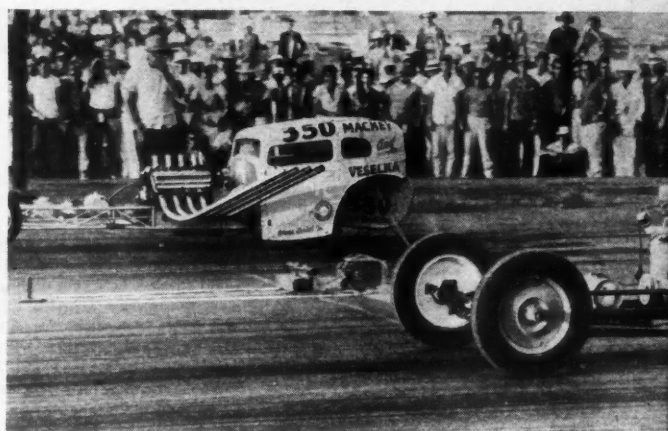
Howard Cam car has twin Chevrolet engines placed very close. Center exhaust angles straight up. Car lost a wheel during one run.



A pair of four-bangers get off the line. Near side car was class champion, turned 99 mph with Model B Ford engine out of dirt track car.



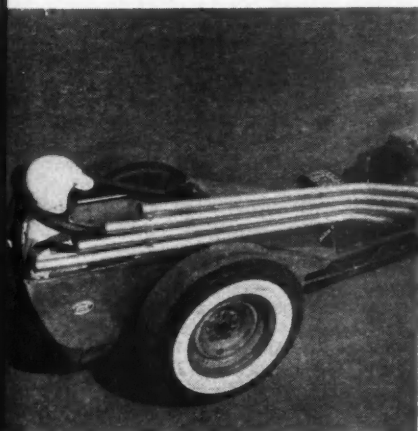
Unique seating position of modified roadsters is designed to keep weight back for better traction. Car 495, driven by Charles Kleckner, Great Neck, L.I., class champion, set speed record of 113.49 mph.



Car 350 driven by LeRoy Mackey, Corpus Christi, is thinly disguised dragster, normally runs as one. Owner installed '32 Bantam body; '56 Chrysler-powered car won class A coupe championship, 135.13 mph.

Photos by Bob D'Olive

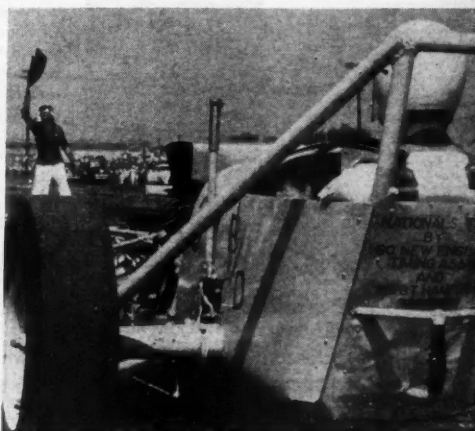
(Motor Sports Pictorial Contest will resume next month.)



Exhaust stacks coming from four-cylinder Model B Ford engine would seem to offer loud serenade to driver Jerold Agrima, of Harlingen, Tex.



Unusual class A coupe has J.C. Hollish of Akron sitting in streamlined nose attached to '31 Ford body which holds '55 Oldsmobile engine at rear.



Nationals attract entrants from every part of U.S. This car from Greenland, N.H. was eliminated in class B, won long distance award.

MOTOR TREND'S
SPORTSCAR QUARTERLY
WINTER EDITION



Star feature of the third issue of this fast-rising magazine is "52 Years with Alfa," a colorful history of the now-retired "Unbeatable" of racing. Another top win-maker, the Maserati team, explains its aim in concentrating on victories rather than commercial potential. Stylist Bob Cumberford gets into the sportscar designing act by presenting his sketches for three "Ultimate" sportscars—for competition, for fun and for luxury. And "Behind the Bamboo Curtain" takes you on a thrill-taut motor trip through Burma, a journey threatened by bandits, guerrilla warfare and other dangerous obstacles.

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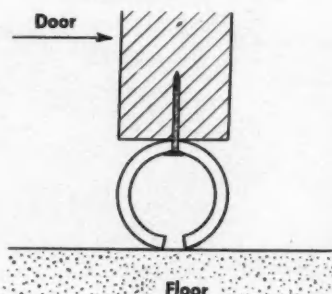
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Handy Hints

by Rodger Darling

"CAVITATION"—An uncommon word for a common cooling system problem. If flow of water is cut down by clogged radiator, sludged block, stuck thermostat or soggy hose, the fast-running water pump will get less water than it demands, causing a partial vacuum (or "cavitation") on the inlet side of the pump. Because the pressure at this point will be less than atmosphere, boiling will occur here (and anti-freeze will be vaporized) even though the engine is operating at a safe 180°! Also, coolant-wasting air may be sucked in, hoses collapse, etc. . . . all good reasons to *clean cooling system* and replace soggy hoses before adding anti-freeze.

WEATHERPROOF GARAGE DOOR—Does wind, snow and trash blow in under your overhead garage door? Here's how to make your door fit tight with a draft-stopping weather-strip that will (1) shape itself to an uneven floor;



(2) prevent paint-peel and wood-rot caused by door sitting on damp floor; (3) cushion door against noise, splintering and glass breakage from slamming down onto floor. Just slit a length of hose and nail it to the bottom edge of the door as shown.

SMOKE SIGNALS—Before "closed-car season" comes, you'll want to check your muffler and exhaust system this easy way: Stuff a rag over the tail-pipe while a friend dribbles a spoonful or two of light oil or upper-lube into the carburetor throat and guns the engine. Smoke will show you joints that need tightening and holes that mean patching or replacement. Exhaust leaks create noise, monoxide danger and real "puzzlers," such as brake trouble when leaking exhaust heats hydraulic line, or low mileage caused by fuel vaporized when hot exhaust blows against the gas tank.

"SEARCHING ACTION"—That's what they call the tendency of permanent-type anti-freeze to seep through radiator hose and pump connections that are water-tight. This penetrating effect may also loosen particles of scale or sediment to uncover unexpected leaks. Which, of course, is why you: (1) Flush the cooling system before adding anti-freeze. (2) Check all connections for leaks. (3) Look from time to time for "sneak leaks" that may be making your "permanent" anti-freeze not so permanent.



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What is it—Best Car Buys is a listing service... a publication which is sent you every six weeks. It is an organized effort to bring to you from hundreds of sources throughout the United States a list of new and used cars that you may purchase at dealers wholesale or below... it is an organized effort to screen from thousands of current wholesale buys the very best ones and present them to you in published form, describing the car... the equipment... the price... the address of the seller and complete instructions for buying wholesale.

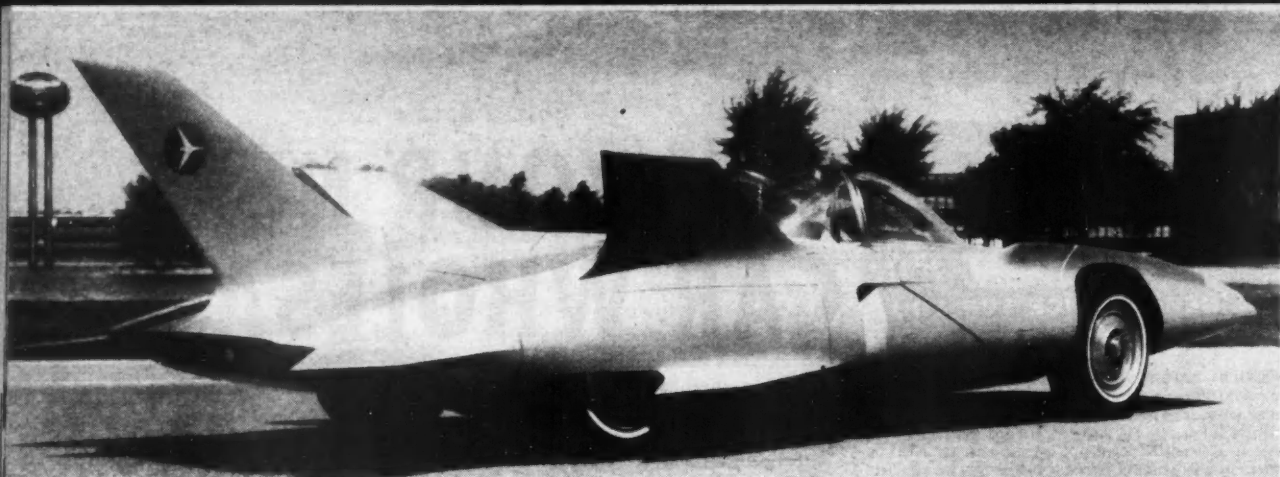
But how can I buy wholesale... I am not a dealer! True, many of these cars can be bought only through a licensed dealer so we have arranged for a licensed dealer to buy them for you. You will be given a registered number and card which will be submitted each time you wish to make a purchase... it's as simple as that.

What type of cars will I be able to buy wholesale? Practically every make and model... NEW and USED... American and Foreign... New cars ordered to your specifications... Used cars from the 1950 models through the 1958's... sedans, hardtops, wagons, convertibles, trucks, even cars from overseas... direct to you.

Where do these cars come from? The giant auto wholesalers who sell large volumes of cars to the used car dealers... private company fleets who sell every one or two years... distressed new and used car dealers who must reduce inventory... car leasing agencies... car rental agencies who may sell a car after four months of use but usually after ten to twelve months. Federal, State, County and City agencies who dispose of cars by bid... fleet brokers.

What is wrong with these cars... they are so cheap! What at first may seem like a gimmick can be explained if you understand the sound business principle behind these prices. First of all, remember these are not retail prices, in fact many are below the average wholesale and are exceptional buys for the car dealer as well as for you. These cars are normally sold only to the car dealer for resale on his lot and if you didn't know how and where to buy direct you might end up buying one of these same cars from his lot and be paying him a profit instead of making one for yourself. The fact that you can buy some of these cars below their actual wholesale value is not because they are wrecked or damaged but because they are usually fleet cars and are sold under a different system than the buying and selling of single units.

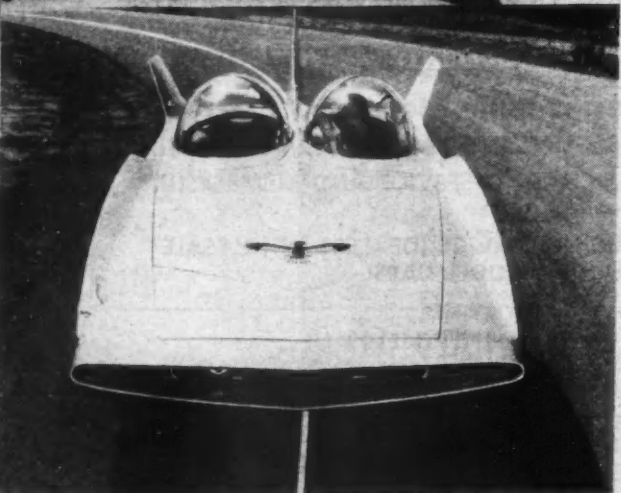
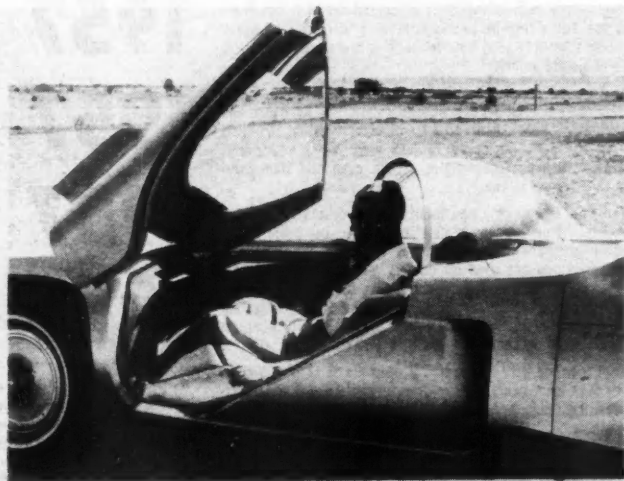
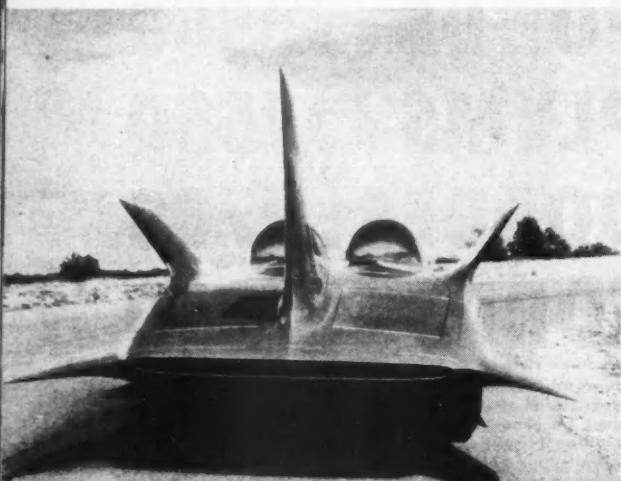
As an example let us examine a typical situation where the fleet user is an insurance company who buys 300 cars each year. To begin with they buy from the dealer who gives them the lowest bid... these prices are usually \$25.00 to \$50.00 over the dealers wholesale. After the company has purchased these cars they set up a tax depreciation on each car which will allow them to sell this car at the end of one or two years for a very small sum compared to its current market value yet justify this loss or depreciation from a tax standpoint... this is the first explanation. When the company is ready to buy another fleet the dealer who sells the new cars is rarely in a financial position or willing to take 300 used cars in trade on a gross profit of \$25.00 a car. Therefore, the insurance company must dispose of their own cars and this is usually done through the giant middleman or fleet broker who will bid and buy the entire fleet. Since his success is dependent on buying and selling as fast as possible... so that he can release his working capital for future bids... he sells price... for he knows that this is the only way he can unload these cars fast enough... his outlook on the car market is how much can he make on his investment in how short a time... not what the market potential is for a single car. His formula is simple... he divides the total number of cars into total price he pays the insurance company and adds a profit suitable for his risk investment and this is the price all 300 cars will be sold for... a very democratic action since among these three hundred cars some may be driven 9000 miles while others may be driven 40,000. You see it will be possible for you to benefit tremendously from this system.



SPOTLIGHT ON DETROIT

continued from page 14

More Details on GM'S FIREBIRD III



ONE OF THE SPECIAL FEATURES OF GM'S Firebird III includes a stick topped by a wing-shaped handle (lower right), which is the car's single control. Push the "Unicontrol" forward, the car goes forward; push it sideways, it goes in that direction; pull it back, the car stops. The stick is located between the two seats and takes the place of steering wheel, brake, and accelerator.

The seven fins, so GM tells us, serve as aerodynamic stabilizers, and also surround the Whirlfire gas turbine engine of 225 hp. This engine is similar in design to the earlier Firebird but is simpler,

gives 25 per cent more fuel economy and weighs 25 per cent less.

Possibly the most interesting feature of the Firebird III—from the standpoint of what you might see in a year or two—is the 10-hp constant-speed accessory drive engine mounted in the front. This engine provides electrical and hydraulic power for the many accessories, but here's what's important: it's made of aluminum, uses a cast integral head, has a compression ratio of 11 to 1, and *does not* use cylinder liners. Though the Firebird may never reach the production stage, such an engine is sure to—and not too long from now.

WILL THE PRO'S GO?

First USAC sportscar race at Lime Rock makes history
and insures big-time road racing in the U.S.

by William Nolan

SHOULD SPORTSCAR RACING go professional in the U.S.? This provocative question has engendered many a heated discussion in American racing circles over the years since the rebirth of the sport in 1949. Now, a decade later, the first fully-sanctioned (by the United States Auto Club, or USAC) professional sportscar race has been successfully run at Lime Rock Park in the rolling hills of Connecticut. The historic date was Sunday, September 7th, when a crowd of approximately 8000 saw affable George Constantine from Southbridge, Mass. roar a factory-fresh 3.9-liter Aston Martin DBR-2 around the snaking Lime Rock circuit for an undisputed victory over a starting field of 15 other potent machines.

Popular, hard-working John Fitch, the man behind the scene at Lime Rock, deserves major credit for this important sports milestone. Racing veteran Fitch, an outspoken long-time advocate of sportscar professionalism, convinced USAC officials that Lime Rock should host the first pro race, then proceeded to personally phone or wire nearly every big-name driver in and out of the country soliciting entries—meanwhile juggling a bushel of rules and paperwork relative to the event itself.

FROM THE OUTSET Fitch was faced with numerous problems. Some two-dozen noise-conscious Connecticut citizens brought court action against Lime Rock Park in an abortive attempt to close down the circuit before the big race, but this was legally waylaid. The Grand Prix of Italy, at Monza (run that same Sunday) claimed the able services of pros Phil Hill and Masten Gregory—and several other supporting name drivers (Carroll Shelby, Troy Ruttman, Ak Miller, Jim Rathmann, etc.) were unable to make the list due to other commitments. When the engine for Dan Gurney's 4.7 Maserati was lost in Customs while enroute to owner Temple Buell, Gurney became a last-minute scratch. And even the car Fitch himself hoped to drive, a fast new Lister-Corvette, was still being road-tested in England.

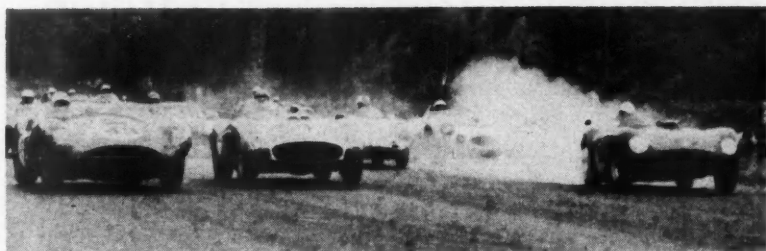
Weather predictions were dour. Even Mother Nature seemed to have joined the enemy camp—as the sky was ominously overcast during Saturday's practice and qualifying time trials. (Under Connecticut law no racing is permitted in the rain.) However, 10 cars and drivers managed to qualify for lead positions for the following afternoon's all-out 100-lap event — while six others passed Technical Inspection for Sunday's practice and a place on the starting grid. Bad luck notwithstanding, at least half of the competing drivers could be considered "names." The list was equally divided between well-known road racing and track drivers. Representing the road racing contingent: California's Bruce Kessler, who won his class at the last Sebring enduro; big George Constantine, a familiar figure in eastern sportscar events; Bob Said, a tough

veteran who started an impressive comeback by a class-winning sweep last year at Nassau; and Art Bunker, of Kansas City, Mo.—known for his work behind the wheel of a Porsche Spyder. The track chauffeurs included: Marshall Teague, two-time USAC stock car champion from Florida—with three appearances at Indianapolis to his credit; Rodger Ward, another stock car champion (1951); Ed Johnson, a veteran of six Indy 500s; and Lloyd Ruby, dirt-track midget ace.

Race Day dawned bleak and overcast, with brooding rain clouds building rapidly in the east—but Fitch and USAC officials were

with the small agile Testa Rossa. Under a brooding gray sky, threatening rain at any moment, the in-fighting was fierce and unrelenting. (It was carefully noted, however, that the five track champions drove cleanly, with obvious sportsmanship. This performance level was maintained throughout—and at no time did the race descend to the fender-bashing contest predicted by some critics.)

Constantine made a small error coming into turn 1 on the 51st lap, and spun the green Aston, but he quickly regained the groove and continued toward the checker. Ruby was still harrying Kessler, only a scant



AWAY THEY GO—Ruby on outside, Kessler in middle, Constantine at pole.

hoping for a clear spot by late afternoon. Their hopes grew dimmer with the darkening sky, and by 3 P.M.—race time—a steady drizzle was soaking the nine-turn circuit. The rain soon slackened, then stopped. However, the track was still very wet.

At 3:45 P.M., the loudspeaker blared: "Would all the cars in the paddock area behind the pits please begin driving around the course?" The idea was an excellent one; the tires would absorb moisture, drying the blacktop in short order.

Just before 5 P.M. (after a short 15-minute practice session) the competing cars rolled out to the line for the first annual 150-mile Lime Rock International Professional Sports Car Race for the Amoco Cup. The sky was still suspiciously dark and the question was: Would the rain hold off for the minimum number of laps necessary to officially complete the race? (If called before 51 laps the entire event would have to be restarted the following Sunday.)

At the green flag it was Constantine (3.9 Aston), out-accelerating Kessler (3.5 Ferrari) and Ruby (Maserati-Corvette) down the straight, but the Aston tucked in behind the Maserati-Corvette around the first turn, proceeding to nip into the lead just out of the esses. After this Constantine had things all his own way and was never to be headed.

Numerous rear duels, however, were constantly in progress. Kessler's Ferrari was pasted to Ruby's tailpipe and Rutan (cut-down VW with Porsche Carrera engine), Meinhardt, and Art Bunker (RS Spyderys) were still having at it; while Markelson finally passed Teague's Corvette-engined D-Jag

car-length separating them. Here, certainly, was a fabulous duel. Ruby, fresh from the midgets, doing superbly in the big Maserati-Corvette and Kessler, still recovering from his serious accident at Le Mans, cornering the stubborn Ferrari with outstanding skill. Track veteran vs. sportscar ace. It was just what the crowd had come to see.

For some 60 laps the duel went on. Then the two cars passed the stands nose to nose and Kessler was seen to abruptly wave Ruby into the first turn ahead of him. Bruce had apparently received a slowdown signal from his pit; the tired 3.5 could not take this kind of beating and finish the race.

At 6:40 P.M. rain began to blanket the twisting circuit—the race was ended at 93 laps. Smiling broadly in the downpour, George Constantine received the checkered flag with a winning average of 78.8 mph. An exhausted Kessler was second, Alan Markelson third. The others in order of finish were: Meinhardt, Rutan, Kuhn, Saidel (winning the Sportsmanship Award for his fine drive in the tiny Jomar) and Herb Swan from Cleveland, the only track driver to finish the race—eight full laps behind the leader. Only half of the 16 competitors had been able to finish the punishing grind.

The first professional USAC sportscar road race was over. A total purse of \$2750 was split by the competitors—with Constantine winning, in addition, the Amoco Cup. The event was an unqualified success, and there is now little doubt in anyone's mind that despite much opposition and procrastination along the way professional sportscar racing is here to stay.



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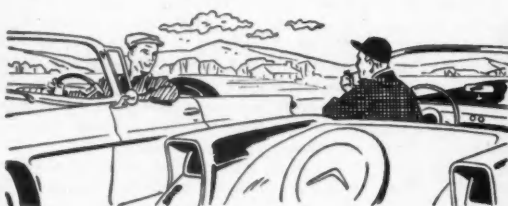


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What's Your Question?

"What's the difference between rayon and nylon tires?"

HOW GOOD ARE THE CLAIMS that tire manufacturers make for their products? Often the tactics used in competitive advertising and publicity campaigns confuse the potential buyer to a point where he does not know what to believe. In most cases the competitors are faced with backing up their claims when their product is exposed to the tests of the best proving ground in the world, the consumer. Stepped-up research and constant improvement to win public acceptance invariably result in a better product.

One of the strangest contests now going on is not so much among the final manufacturers, but between the suppliers of two of the important components, nylon and rayon. The final decision will have no effect on whether milady will wear stockings, chemises or girdles of nylon or rayon, but which of these man-made threads will make the cord for the world's tires.

Cotton, which dominated the tire cord industry until the early '50s, succumbed almost overnight to a superior cord, rayon. Continued research over a five-year period improved rayon to a point where tire cord problems almost vanished. Then a new synthetic fiber, nylon, entered the tire cord picture and began competing for a potential annual market of several hundred million dollars and a replacement estimated at an additional 50 million tires a year. These are not penny-ante stakes, and the companies involved are among the world's largest.

According to DuPont and Chemstrand, leading nylon producers, tires built with their cord are stronger, safer, and wear longer. American Viscose and other rayon manufacturers claim that tires made with rayon cord have all the features of nylon and more.

IN BETWEEN IS THE MOTORIST, pounded on all sides by advertising campaigns and tests that put tires through all the tortures of a Spanish Inquisition. Most of the tests the buyer sees paraded before him are spectacular, lend themselves well to dramatic pictorial presentation, but prove very little about tire strength or quality. Tire cord is the most important component of a pneumatic tire because its function is creating a fabric cage to which all other components are bonded. It is literally the foundation on which a tire is built, and as such must resist impacts against obstructions, high-speed driving heat, and have a reasonable life span.

Motor Vehicle Research of New Hampshire undertook to make impartial tests of leading brands of both types of tires, matching as nearly as possible the same "grade" of tire in all tests. Five police cars were equipped with two rayon and two nylon tires of the same grade. Operation robots that recorded every moving minute of the vehicles, the acceleration and the braking gave daily

records of each car. Wheel alignment was checked weekly and the tires were rotated each 1000 miles to insure uniform exposure to wear for each tire on each wheel. When the tires had worn smooth the records showed no superior wear characteristics for either rayon or nylon.

In further tests, three late-model sedans were equipped with 100 level rayon tires and as near equal grades of nylon tires. The cars were driven in tight circles until the tires smoked and then ridden over six-inch-high granite curbing imbedded in the test track. Impact in most cases was hard enough to dent the rim. The tires were then dissected in the laboratory, cord by cord. Not one cord in any of the test tires was broken, proving that neither rayon nor nylon can claim superiority in impact resistance.

THE MOST SPECTACULAR TEST conducted by Motor Vehicle Research was one of their own development called "The Force Resistance Tire Test." Compressed air is fed to a tire at a rate producing a pressure of 12 pounds per square inch every 30 seconds until the tire bursts. Every brand and grade of tire produced in the United States was subjected to this test to determine the elasticity or stretching qualities of the cord, with results that left little doubt as to the superior stretch strength of rayon cord and revealed some startling facts about tire standards. In many brands, second- and third-line tires out-performed first-grade tires, but this is another story.

Naturally, the tires tested were all of the same size, 6.70x15, normally designed to operate at pressures of 24 pounds. One brand of rayon cord tire resisted a pressure of 300 pounds per square inch, equivalent to a force of 360,000 pounds, before it burst. As we said before, this is a very spectacular test, but it was the only test in which rayon was definitely shown to be stronger than nylon.

Nylon cord tires are much more difficult to recap due to the distortion of the cords when subjected to the 300° temperatures of the tire molds. Concave treads were common in retreading until the manufacturer pre-conditioned the cords by partially inflating the tire during construction. Retreaders still have difficulty turning out a first-class job on nylon cases.

The "morning thump" that owners of nylon tires experience is a characteristic of nylon, which is a thermo-plastic material and is affected by heat. The tires, warm from driving, develop a flat spot where they cool in contact with the pavement. They also "grow" as they warm up with driving heat. Two matched tires, one nylon, one rayon, were mounted on the same dual wheel of a test truck. As driving progressed, the nylon tire became larger than its companion and began to support more and more of the load, consequently wearing much faster.

The undesirable thermo-plastic qualities of nylon are being minimized by research to a point where "thumping" may soon be a thing of the past. This battle to dominate the tire cord market will produce some fantastic development in synthetics, for while both of these giants of industry are scuffling in the dust of competition, they see, from the corner of their eyes, another material used successfully by a leading European tire producer—steel wire.

/MT

1959 HOT ROD ANNUAL

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This year's edition of this ever-popular favorite is a "Space Age Special." The accent is on years-ahead thinking in hot rodding, from George Barris' futuristic "World's Most Beautiful Roadsters" to the Space Age Rod Roundup, a photo gallery of the sharpest hot rods in America.

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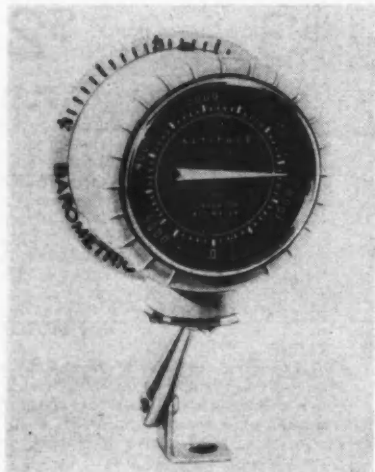
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MOTOR TREND/NOVEMBER 1958 73

TRENDS in New Products

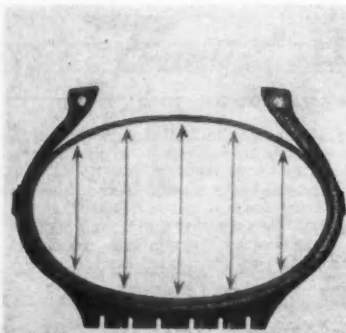
(Information below is based on news releases from the manufacturer or distributor. MOTOR TREND has not tested any of the specific products listed, and therefore does not necessarily endorse them. Tested items are featured in our Product Use Tests.)

AN INTERESTING INSTRUMENT that requires no other hook-up than mounting, is the Taylor Forecaster-Altitude for motorists. A pivotal base for cowl or dash mounting allows the unit to be placed within view of the driver or passengers and only one mounting hole



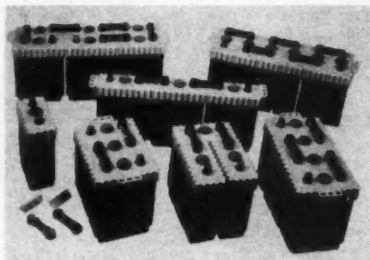
is needed. A movable scale for setting barometric pressure for predicting weather, and a scale calibrated for altitude, make it a dual-purpose instrument. Priced at \$12.50,

LOW PROFILE TIRES that are oval in cross-section and wider than they are high have been announced by United States Rubber Co. in Detroit. U.S. engineers claim that the tire, with its lower profile, mounted on a 15-inch wheel, gives the same overall height as a conventional tire mounted on a 14-inch wheel;



the Barometer-Altitude comes in three ranges: 0 to 5000 feet, 0 to 10,000 and 0 to 15,000. Taylor, of 95 Ames St., Rochester, N.Y., suggests that a range suited to the average altitude anticipated be selected. They are sold through better optical houses, and marine and navigation instrument stores.

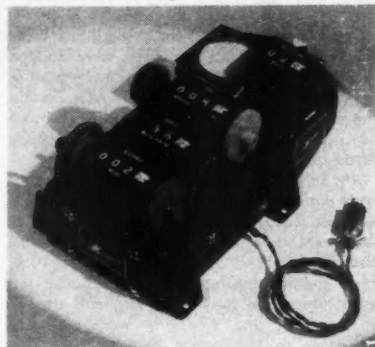
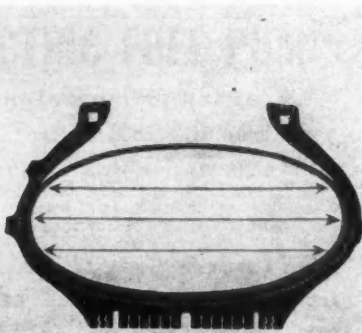
A NEW-TYPE BATTERY, called Aut-O-Cel, features replaceable plastic cells which interlock to form batteries of all popular sizes and is now ready for distribution to car owners. The basic cell units are coupled together by



dovetail joints to form batteries of any current rating. In combination, these units serve to replace any of the 19 different sizes of ordinary batteries used in commercial and passenger vehicles, as well as in tractors, diesels, boats, radios, powerplants, stationary engines, battery-powered vehicles, etc. According to the manufacturer, battery difficulty is the result of the failure of only one cell. When the battery fails, good cells must be discarded because all are in the same case. With Aut-O-Cel the single dead cell is replaceable, saving the difference in battery costs. Each cell of the new-type battery is guaranteed up to 40 months. For prices and other information, write Aut-O-Cel Co., P.O. Box 220, Des Moines, Iowa.

A NEW PRECISION RALLY COMPUTER has been designed by national Class A rallyist Jim Hellen and is now available for those who take their rallying seriously. Manufactured by the Kearfott Co. of New Jersey, the computer is an accumulative type instrument which provides time data for any distance or distance data for any time period. It is

it flexes less than conventional tires, making it smooth riding and cooler running with greater resistance to side thrust when cornering. The new tire is made in tubeless form only, using tempered nylon cords, and will list at \$81.20, compared to \$86.45 for the current U.S. Rubber premium tire.



independent of the car with the exception of electrical power required for the computer's motor. Some of the features include: Continuous computation and display of time, speed and distance; additive or subtractive computations; accumulative display of elapsed time and distance traveled; display of next rally instruction for mileage and direction. The Kearfott Rally Computer graduates time in minutes and seconds, speed in mph to the nearest $\frac{1}{100}$, and graduates miles to $\frac{1}{100}$ of a mile. Cost is \$250. Further information can be obtained by writing Kearfott Co., Inc., 1500 Main Ave., Clifton, N.J.

HERE'S A BOOT for winter wear—in or out of the car—good for wearing at races, rallies, or just slogging around. Made from water-



resistant leather with red or natural fleece linings, it also has squeegee non-slip rubber soles. Available for men and women, sizes 4 to 12, they are priced at \$14.95, plus 45c for postage, within the continental U.S. Write Fellman, Ltd., 49 W. 43rd St., New York 36.

A NEW GLASS-PACK MUFFLER by Power-Pak is designed to give minimum back pressure and noise with maximum durability. Power-



Pak has developed an inner core with diagonal louvers similar to firearm silencers to produce a quieter tone than usual with this type of muffler. A new method of interweaving Fiberglass around the center core is claimed to reduce condensation, and 14-gauge steel throughout the muffler gives longer life. The manufacturer has not set any prices but promises they will be competitive. For further information write to: Power-Pak, 416 E. Olive St., Gardena, Calif.

PRODUCT USE TESTS

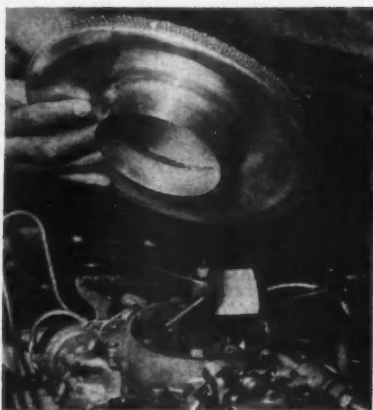
Conducted by

Charles Nerpel Technical Editor

Turbo-X Power Booster, an air-activated fan, fails to increase air flow in test

AMONG THE MANY DEVICES offering motorists amazing improvement in car performance is one which claims to work on the same principle as a supercharger, yet requires no outside power and will deliver more power, efficiency and economy.

Essentially, the Turbo-X Power Booster is a thin, mushroom-shaped air cleaner claimed to be 110 per cent more efficient than the factory air cleaner. In the center is a hollow core which allows room for the "impeller," a small three-bladed aluminum sand casting which, on our testing model, was rather



badly out of balance. This "impeller" rides on the long stud which fastens to the top center of the carburetor—ours was a four-barrel carb on a new Pontiac Bonneville. Drop the Turbo-X over the "impeller," fasten the wing-nut at the top and "have the most thrilling ride of your life this afternoon," the manufacturer promised.

Loading up with Mobilgas Special we headed for the dragstrip on the assumption that the greater power claimed would mean an improvement in quarter-mile speed, elapsed time or both. To be absolutely fair, we tested the car three ways: with the Turbo-X installed, with the factory air cleaner, and with no air cleaner. Here are the comparative times, averaged after three runs:

	W/AIR CLEANER	NO AIR CLEANER	W/TURBO-X
0-45 mph	5.8 sec.	5.8 sec.	6.0 sec.
0-60	8.8	8.8	8.9
1/4-mile	17.1 and 85 mph for all three.		
30-50	3.7	3.8	3.6
45-60	3.2	3.2	3.2
50-80	8.6	8.8	8.5

If it wouldn't give more speed and "up to 20 more horsepower," perhaps it might give "up to six miles more per gallon—from a single 60-second change." They were right. It took us only about 60 seconds to install the Turbo-X. But what about that gas mileage? We used a Vacomat Mileage Tester, which accurately meters a tenth of a gallon

of fuel at a time into the engine. On a straight and level course it is simple to obtain actual miles per gallon at any steady speed—60 mph in this case.

Here's how we did. Each figure is the average of three runs. Because the Pontiac does not have a reset trip mileage it is impossible to read total distances accurately. These figures are actually plus or minus about one mile per gallon.

With air cleaner—18.1 mpg.

No air cleaner—16.5 mpg.

With Turbo-X Booster—17.0 mpg.

It doesn't take an engineering student to determine that blowing on a fan will make the blades go around, but their movement will not create any additional air pressure. In fact, this installation does more to retard the movement of air than to increase it. At \$19.95 this would seem to be a very expensive and restrictive air cleaner.

Rydlyme solution dissolves lime and scale in test on corroded metal surface

WARM FALL DAYS will soon have colder and colder evenings, and before we know it, anti-freeze weather will be upon us. The necessity of preparing our cooling systems for winter use might reveal the causes of the overheating problems that plagued us during recent hot weather touring.

Scale and rust are just some of the things that clog radiators and engine passages. Lime, present in various amounts—depending on the water sources in various parts of the country—has a nasty habit of depositing itself inside water passages, especially under conditions of heat. Take a good look at the shower head or the inside of the water pipes in your home and you will have a fair idea of what occurs in the small tubes in the radiator of your car.

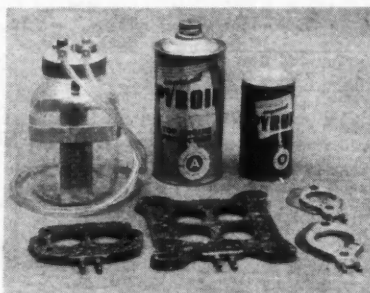
Rydlyme, a non-toxic solution for dissolving lime deposits and removing rust and scale, is a new product of the Apex Engineering Co., 75 E. Wacker Dr., Chicago. It is guaranteed not to harm gaskets, hoses, automotive paint, or your hands—but keep it out of the eyes and away from the unpredictable appetites of small children.

Before exposing an expensive automotive cooling system to the actions of an unknown chemical, MOTOR TREND decided on a test where the action of Rydlyme in removing lime and scale could be watched for both its action and possible harm to metals. A well-clogged shower head was submerged into a 50 per cent solution of the product and the action started. This is a more heavily concentrated solution than one recommended for radiator use, but a good test for possible harmful qualities. Within minutes the lime and scale began to dissolve into the solution, exposing places where the alkalis of tap water had eaten through the plating. Prolonged immersion failed to do any apparent harm to the base metal, nor was there any softening or reaction on several pieces of radiator hose in the same container. Under these

observed conditions, Rydlyme seems safe for automotive cooling systems.

With these cleaning properties, the product may be used for other than automotive purposes. The manufacturer recommends other uses in the home, from steam irons to shower heads. With the increased use of battery-powered coffee makers and other food warmers for automobiles, Rydlyme is a wonderful harmless chemical for keeping these items at top efficiency when lime deposits clog them.

Available through automotive jobbers, filling stations, and retail parts houses, Rydlyme sells for \$2 a pint. Twelve ounces are sufficient for cleaning the average automobile cooling system, so you have four ounces left over for those other household applications.



Pyroil Impact Lubricator proves merits of top oil injection on '58 test Pontiac

ATOP OILER, operating on a new principle of injection, has been introduced by the Pyroil Co. Called the Pyroil Impact Lubricator, it meters oil into the fuel/air mixture at the highest point of its velocity. Two small tubes, one pressure and one vacuum, extend into the airstream at the base of the carburetor, where at high cruising speeds velocities near the speed of sound are attained by the fuel/air mixture. Instant atomization of the oil occurs when it hits this high-speed stream. The pressure differential between the two tubes controls the amount of oil that enters the system, and a large-capacity supply bottle, enough for about 1200 miles with a big V8, can be mounted in any convenient place, as it does not depend on gravity feed. By creating a pressure differential at the point of injection, the oil flows from the high to the low pressure side. The higher the difference in pressures, the greater the flow of oil. This produces a supply of oil always directly proportional to the demand, speed and load.

MOTOR TREND'S test car was a 1958 Pontiac with three two-barrel carbs. One of the reasons for this selection was to see if installing the injector plate under the center carburetor would involve any linkage or air cleaner problems. We had to back off on the manifold studs about three turns so the nuts had enough threads to hold the car-

continued on page 78

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Motorcycle test ride #1

I took the turns at "Indy" on two wheels

Racing Star Paul Goldsmith puts Sportster CH through its paces at Speedway track

"I thought I'd experienced every thrill the 'brickyard' could offer," reports Paul Goldsmith, holder of many stock and big car speed records. "That is until I went around on two wheels with a Harley-Davidson Sportster CH.

"With the big OHV mill purring, I cracked the throttle and was out on the track before I could catch my breath. I leaned her low into the first turn — leveled out into the straightaway easy as riding a rocking chair. Then, I really poured it on . . . the big pagoda was only a blur before the CH's big brakes brought me to a sure, safe stop."

You'll agree with Paul Goldsmith — on or off the road, the CH is a rider's dream. In the rough, over hills or on the highway, you'll discover a new world of motorcycling thrills. Test ride one today at your nearest Harley-Davidson dealer — or write us for full color folders.

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PRODUCT USE TESTS

continued

buretor down, but once back in place, the linkage worked perfectly and the huge air cleaner went right back on.

On three-barrel setups like the Pontiac, where most of the driving is done on the center carburetor (the end ones are progressively linked by vacuum), it is necessary to use only one injector plate. For opposed engines such as the Porsche or VW with dual-carburetor setup, two plates and two bottles must be used.

The second reason for selecting this particular Pontiac was that it was a brand-new car. True, we had a few hundred easy miles on it and the engine was typically "new car," a little stiff and inclined to run hot—but any extra lubrication to the valves and rings that a new or rebuilt engine can get will ease the strain of break-in and shorten the high wear period of cold starts.

Once the installation was complete, and the engine started, it was a matter of setting the adjusting screw atop the supply bottle for the proper flow and proceeding with the test. A tiny thermostat built into the control valve assures a uniform flow of oil regardless of underhood temperatures. This important feature causes the oil to flow the instant the engine turns on a cold start, but prevents smoking due to an oversupply when

temperatures under the hood start to climb.

Driving around the city a few miles is no way to prove the claims of longer engine life by any oiler or additive, but there was a noticeable freeness in the engine and less tendency for the temperature needle to climb into the hot zone. Mixing oil with gasoline is one way of getting lubrication to the combustion chambers and top ring areas, but often, such mixtures seem to take a little of the zing away from the fuel. Injecting it into the mixture—and this is the best we have seen so far—assures uniform distribution in proportion to the demand.

Included in the Impact kit is a container of oil additive that Pyroil recommends using in conjunction with their top oil. It is good for cleaning things up in the crankcase if a top oiler is being used for the first time on an old engine.

The Pyroil Co., Inc., La Crosse, Wis., is so sure that their product will produce results that they have instructed their dealers and jobbers to return full credit to any customer who is not satisfied after using one quart of top oil. Available direct or from local auto parts houses, the complete unit includes top oiler and injector plate (specify make and model of carb), a quart of Pyroil "A" top oil and a 12-ounce can of Pyroil "B" crankcase additive for \$9.95.

Electric Windo-Lifts are easily installed on our test car, operate efficiently

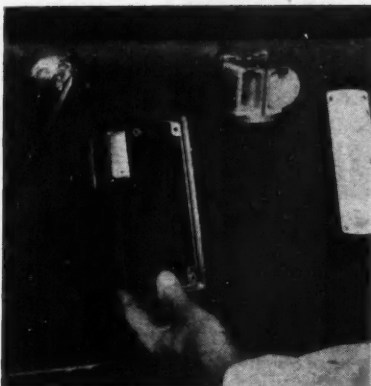
DESIGNED TO FIT any car with crank-type window handles, Windo-Lift is a new electric conversion unit that can be installed in an hour. Available for six or 12 volts, the self-contained motor and gear drive are housed in an attractive plastic case, and a tough molded nylon adapter couples to the crank handle shaft. Silent and powerful, the lifts are easy to wire and may be removed without leaving gaping holes in the door panel, should you decide to retain them when selling your car.

A set was installed on MOTOR TREND's KaiSoto test car, and they have been working

beautifully despite the rather heavy windows and high friction mechanism. Two buttons on the driver's side allow control of both windows, while the right-hand unit has one control button. A clutch drive prevents breakage of winding mechanism and motor, but it is strong enough to clamp the window up tight against careless fingers, so watch out.

Special spring wire clamps require only small holes, and it is not necessary to remove door panels to attach or wire the unit. Color coded wires are fed through the hole around the winding pinion and out the door stop holes and taped to the hinge. The instructions are so complete that you do not have to be an electrician to get it working.

The manufacturers, AMT Corp., 200 Briggs Bldg., Birmingham, Mich., are setting up national distribution through new car dealers, but can handle direct queries concerning



NEAT PLASTIC CASE covers the husky motor and angle drive of Windo-Lift unit.

availability in any area. They believe that many people will take advantage of the suggested retail price of \$34.50 per set, rather than invest in optional factory electric windows that they cannot remove if they sell the car. A suggested \$5 charge if installed by the dealer still brings electric windows well below factory options.

Benrus self-winding clock and late-model Plymouth wheel installed in KaiSoto



MOTOR TREND'S TEST CAR, a '52 Kaiser Traveler with a '57 DeSoto Fireflite engine and TorqueFlite pushbutton transmission, is, and will continue to be a laboratory for product use tests. Engine, body and running gear will serve as a workbench for many of the tests necessary to give our readers firsthand information. Each month we will report changes and additions to the KaiSoto, our mobile guinea pig.

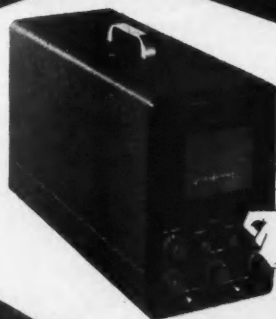
We often see things on other cars that we would like to have on our own. Why, is often hard to explain, other than it appeals to us. A case in point is the clock hub steering wheel on the 1958 Plymouth. It's a deep curved steel spoked wheel with molded plastic hand grips and a beautiful Benrus-self-winding clock in the center.

After removing the Kaiser wheel and measuring the centers of it and the Plymouth wheel, Bill Ginder, who installed the DeSoto engine, decided that he could mount the new wheel if given enough time. Problem: The taper and spline on the steering shaft weren't even close to those on the new wheel. Had they been, the dish on the Plymouth wheel was so deep (about four inches) the driver would have to sit in the back seat to steer. Using a pipe cutter, Bill was able to cut four inches off the steering column and the housing without disturbing the location of the turn indicator switch plate which rides on a shoulder on the steering shaft deep inside the outer housing. Knocking the center out of the Kaiser wheel and welding it into the hub of the new Plymouth wheel solved that problem, but would have been impossible with a die cast wheel. Then, the shaft end was shortened to 2½ inches. Using plenty of wet rags to protect the column housing, it was welded back onto the steering column. Result: A modern comfortable wheel and an accurate clock that winds itself every time the wheel is turned.

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(The most famous auto picture of all time. The actual car and trophy on display at the museum.)
The Thomas Flyer, winning American entry, seen across the Salsburg plain in the middle of the globe-crossing race.

ROBERTSON COMES THROUGH
George Robertson drives "Old 16", the 1918 R.P. Leamobile to become the first American winner of the Vanderbilt Cup in 1910.

DE PALMA FINISHES HIS MERCEDES HOME
Boris de Palma drives Indianapolis road's greatest chase, as he pushes his disabled car after leading the 1912 race for 100 laps.

GANGWAY FOR BARNY OLDFIELD
The favorite of the early dirt tracks is traced into a 1904 fair grounds in this record-breaking race, the Pontiac State Regatta.

THE GLIDDEN TOUR OF 1907
A hold-up by a steam roller delays the White Steamer, Lucie, Packard and Buick convention between Cleveland and New York City.

CLIMB TO THE CLOUDS
Bill Hilliard arrives at the summit of Mt. Washington on the Napier in 1902 - 2/5 on July 18, 1902.

THE BRIGHTON SHOW
At Pacific and French Laneships bring the 1910 U.S. Empire into the pits for a quick fix change in the race of October 23, 1908.

TRANS-CONTINENTAL INTERLUDE
"Old Pacific", the one cylinder Packard of Tom Ford, proves for durability in Nevada in June, 1902 on route to New York.

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SELL

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FERRARI 250 3000cc 3-liter 12-cyl. competition Spyder cpe. Like new—must see to appreciate. \$6800. 975 E. 67th St., Inglewood, Calif.

'29 MODEL A bus, cpe. Mechanically good, body fair, rebuilt top, new radiator, set of new tires. 92,000 mi.; no rebore. Best offer over \$200. H. D. Pickhardt, c/o Mrs. Eva Burke, R.D. #1, Powall Center, Vt., or phone E. Graver, Forest Hills, N.Y., TWining 7-0430.

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'15 STEVENS-DURYEA rdstr. New maroon paint; windshield, radiator & lights brass. Rubber good;



many spare parts. Asking \$1500. Send 25c for pix. George R. Read, 2488 Riverside Dr., Santa Ana, Calif.

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cond.; 40,000 mi. \$3250. H. M. Alvares Correa, 22 Place Malesherbes, Paris 17, France.

'32 OLDSMOBILE 6 sp. cpe. 6 wooden wheels, 7.6:1 head. Good cond.; can run anywhere. \$200. Also Rausch-Lang electric auto motor, resistance meters. \$75. S. Miles, Box 68, Somers, Conn.

'57 CHEVROLET V8 ENGINE—283 cu. in. New Dunton cam, valve job, inserts, mains, rings, cam bushings, etc. Never run since rebuilt. \$275. Details & pix on request. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

'39 FORD conv. sed. Equipped, easily restored. Drive anywhere. \$250. Also '41 Lincoln Continental V-12 hdt. Very clean, drive anywhere. \$750. Ken Hill, West Sand Lake, N.Y.

'49 CADILLAC 62 4-dr. sed. Needs tires & o/haul. This is a hard-to-find standard-shift Cad. Best offer. Leon W. Price, 608 W. Seminary, Onarga, Ill.

'47 LINCOLN CONTINENTAL conv. '52 Lincoln engine & steering column, automatic transmission. Black body, tan top, w.w.s. Exc. cond. \$1975. George Karoly, 2655 Edison Ave., Granite City, Ill. Phone Glenview 2-1188.

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'47 LINCOLN CONTINENTAL cabriolet, with '53 Lincoln V8 engine & Hydra-Matic, r & h, good tires. Needs paint & some body work. Best offer over \$255. Bill Gibson, 827 Adams St., Findlay, Ohio. Phone GA 2-9535.

'30 CORVET L-29 sed. New tires; runs perfectly. Road light turns with front wheels. Sam Waters,



3834 S. Wabash Ave., Chicago. Phone ATLantic 5-2188.

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'29 STUDEBAKER Dictator 4-dr. Engine & body in good cond.; 6 tires & wheels. Needs new brakes. \$400 or best offer. Robert Myer, 155 W. Burnham, Bartle Creek, Mich. Phone WO 2-3497.

'53 STUDEBAKER cly. cpe. with '55 Century engine, stick shift with o.d. New uph.; 2500 mi. on rebuilt engine. \$895. Grant Schreiber, 807 West Ave., Reedley, Calif. Phone MELrose 8-0253, or (Fresno) Baldwin 9-1983.

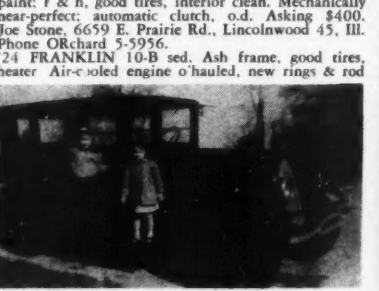
'22 DODGE cpe. Fully restored—new chrome, new paint, orig. leather uph. Engine perf.; drive anywhere. \$450 firm. John Peters, Valley, Neb.

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'40 PACKARD 120 conv. Exc. body, good engine, new top, perf. mech. cond. Used everyday. First \$295 takes it. Must see. D. Robertson, 458 W. Academy St., Clayton, N.J.

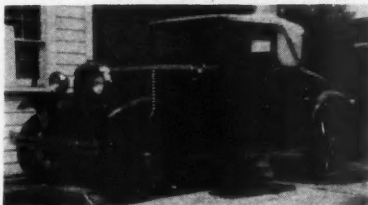
'14 FORD touring. New lacquer finish; 100% restored mechanically. Car would be prize-winner with new top & pix. \$850 firm. George E. Hall, Montour Falls, N.Y.

'34 DE SOTO Airflow cpe. Surprisingly clean sports car—stored 12 yrs. 6-cyl. engine rebuilt; needs battery, license & gas. First \$150 takes. Earl Walker, P.O. Box 261, Belvedere-Tiburon, Calif. Phone GI 3-1315.

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\$1250. Paul Nelson, 805 S. Xanthus, Tulsa, Okla.
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 ASYON-MARTIN DB2-4 Mark III. Jet black, with red leather interior. Less than 1000 mi. Will deliver anywhere in the 11 Western states. For details write or phone Bob Thompson, 2223 N.E. Sandy Blvd., Portland, Ore. Phone BELmont 6-4165.
 '36 CORD 810 sed. Engine, transmission, front-drive unit—all in good cond. Needs body work; tires fair. \$450. James R. Johnson, Ellington, Mo.
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Pix on request. 25c. \$450. R. D. Reed, 2443 Hammond Pl., Kirkwood Gardens, Wilmington 8, Del.
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 '41 LINCOLN CONTINENTAL hdp. Engine newly rebuilt, but not completely assembled. Body needs paint. Many extras. \$500 firm; no trades. H. B. Wood, 834 Canyon Rd., Santa Fe, N.M.
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'41 LINCOLN V-12 3-window cpe. in fine stock cond. 10,000 mi. on complete new engine. Manual shift, r & h. New tires, shocks, springs, clutch, battery. \$550, or good '53-'54 Rambler. Stude Champ cpe., Ford 6 or 2 Dan A. Rothwell, 1451 Attica Dr., St. Louis 37, Mo.
 '45 ALFA-ROMEO 2 1/2-liter 5-pass. conv. Rt.-hand drive, dohc engine, Becker radio. Alum. body, with



Borrani wire wheels. \$850; trade-in considered. Pix 50c. Earl D. Potter, 8811 W. 102nd St., Rte. 4, Oak Lawn, Ill.

'51 DAIMLER drophead in exc. cond. Rt.-hand drive; seats 4. Wilson pre-selector. Consider sports foreign or late American conv. Otherwise \$1800 firm. H. B. Wood, 834 Canyon Rd., Santa Fe, N.M.

WANTED

'29 MODEL A rdstr. with rumbleseat. Must be in good cond. Send price & pix, if available. D. E. Fagan, 12043 S. 70th Ave., Palos Heights, Ill. Phone GLbson 8-1050.

'36-'37 CORD 4-place conv.—restored, semi-restored, or restorable. State price & cond. in 1st letter. Gerald A. Gates, Rt. 3, Box 196, Snohomish, Wash. Phone LO 3-7109.

OWNERS INSTRUCTION MANUALS for '27 Pierce-Arrow Model 36 (dual-valve, dual-ignition 6) & '25 Pierce-Arrow Model 80. R. L. Phillips, 1112 S. Miller St., Santa Maria, Calif.

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ESCAPE ROAD

Edited by
Erwin Rosen



"Quick, Emily, turn on
the windshield wipers!"

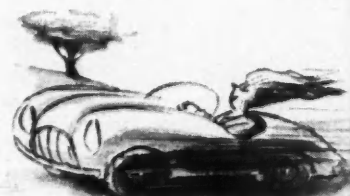


"Congratulations! You now hold
the standing quarter record for this street!"



JAMES JOSEPH

LATEST ADDITION to the friendly slogan slinging among cars of various
classes is this appropriate sign, affixed after the owner learned how
much repair would cost and decided to display this moral of the story.



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Test-tour to... MONTEREY

by
Walt
Woren

MONTEREY PENINSULA, located 120 miles south of San Francisco, 320 miles north of Los Angeles, and 135 miles west of Fresno, impresses a good number of people as being the ideal place to retire. To others not yet in that position, it represents countless square miles of scenery unsurpassed anywhere in California.

Within a fairly small area you'll find quite a variety: Fish Harbor, with its numerous fishing boats of all shapes and sizes, and a wharf resplendent with fish cocktail snack bars and good restaurants; the Monterey peninsula with its 17-mile drive through the Del Monte Properties (former scene of the Pebble Beach Road Races and present annual backdrop of the rich Pebble Beach Golf Tournament) that winds along close to the surf where you can see evidence of shipwrecks, myriad deformed cypress trees, and enough fascinating sights to keep you bug-eyed; Carmel, with its many quaint shops and art festivals; and, a generally cool climate that's not too lavishly blessed with sunshine, but does have invigorating air and a not-too-depressing fog.

You can therefore well imagine that we looked forward with pleasure to a long weekend tour to this "Land of Firsts": the first seat of government (under the Mexicans), first government building in California, first brick house (made from bricks kilned in Monterey), first theater (and also where admittance was first charged), one of the first "pre-fabricated" houses, and the first house of the style now widely known as "Monterey Architecture."

For the test-tour, we picked up two dissimilar, yet similar cars: an Aston Martin (from Peter Satori in Pasadena) and a Ford Thunderbird (from Ford Motor Co.). At the cost of possibly alienating the affections of some of our sportscar friends, we found that the T-Bird, with certain modifications, *could* qualify as a Grand Touring car (see page 43). Just for the sake of argument, let's compare these two cars.

They are alike in that they are about the same wheelbase, they seat four (though the Aston Martin does it stingily), they both have a solid feel at high cruising speeds, they each have good acceleration, and both have good visibility.

Where they are not alike is in inside room, quietness, steering, ride, ease of entrance and exit, controllability, and driving technique.

More specifically, the Thunderbird has more room inside, particularly in the rear seats—and for luggage, too. The Aston Martin is mainly a two-seater with jump seats that should be used only occasionally; the seatback folds flat to give ample luggage area, which you can reach from your seat up front. The T-Bird has a conventional, not overly-large trunk.

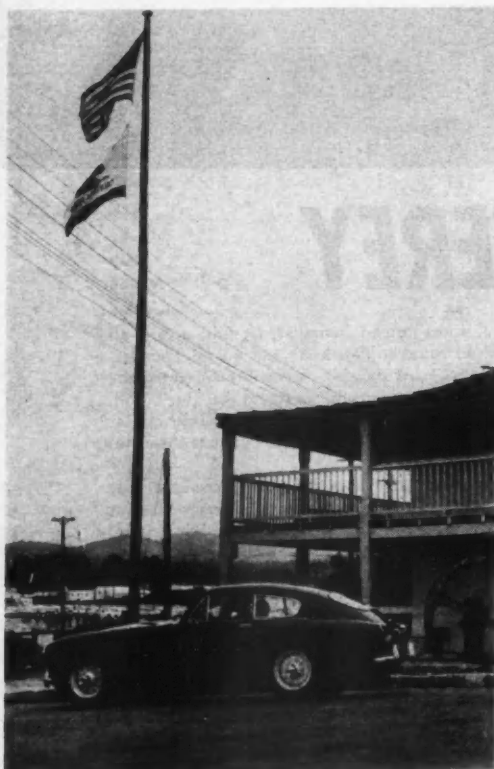
The Thunderbird has easier steering—naturally, with power assist—but it's nowhere near as fast as the Aston Martin. The Aston Martin steers hard at low speeds, but as the speed increases, so does the ease of steering. It is always quick and accurate.

The softer ride is in the Ford product, though this affects its cor-



Test-tour to Monterey . . .

ASTON MARTIN RESTS ALONGSIDE FORT MERVINE WAR MEMORIAL WHICH COMMEMORATES THE CAPTURE OF CALIFORNIA IN 1846.



nering ability—being somewhat too soft in turns. The Aston Martin's ride at times gets almost choppy and is definitely on the firm side, where it should be, so that it stays flat in turns. For the sake of passenger ease it would be a good idea to have a deeper bucket seatback and/or a grab rail. You can go into a turn at a speed slower than it is possible to take it and when you realize this you punch it harder, shifting the passenger in his seat.

The quieter of the two is the Thunderbird because of more soundproofing and insulation. The Aston Martin, on the other hand, is noisy only in the sense that the engine revs up and you hear it. To one who would buy such a car it's a delightful sound.

The front-hinged hood on the Thunderbird provides good engine accessibility, but it is hard to close. The hood and fenders of the Aston Martin lift forward easily to expose the entire engine and front suspension. The Aston Martin caters to the tinkerer, what with its fitted tool box, grease gun, hand crank, etc.

The Thunderbird is easier to get in and out of, particularly into the rear seat and especially for a woman. The Aston Martin is not too easy to get into because of the high siderails. A woman with a tight skirt finds it difficult to get into the jump seat gracefully.

Whereas the Thunderbird is strictly a pro-

duction machine with its assembly line V8 and all the inherent problems thereof, the Aston Martin is more finely engineered and handcrafted. You're not likely to get a production car that uses a double-overhead cam six with wet sleeves, a four-bearing balanced crank, two S. U. carburetors, etc.

The controls on the Thunderbird are almost all easier because of more room inside; on the Aston Martin the clutch, brake and throttle are all too close for wide-soled shoes, having no room at all for the left foot to rest on a long drive.

The difference in driving technique is quite noticeable. The Thunderbird is a car that's easy to drive—if you want to relax as you drive. When you're behind the wheel of the Aston Martin, you know that you're driving. But it never could be considered as work.

The mileage for the two powerful cars, both driven at the same speeds over crowded highways on a weekend, and going through towns that many times slowed down both cars, was 14.8 per gallon for the T-Bird, and 22.5 for the Aston Martin.

Which one would we buy? At \$6995 for the Aston and \$4575 for the 'Bird, it's still a hard choice. Price could be the deciding factor, though they are for different types of people. Personally, we'd settle for either, or preferably, both.

"OLD CUSTOM HOUSE" is California's oldest government building, built during Mexican period. Here Commodore John Sloat first raised the U.S. flag.

in an **ASTON MARTIN** and a **THUNDERBIRD**



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PHOTOS BY CRIBBIN



ONLY SIMILARITY between engines of Aston Martin and Thunderbird is the fact that the hoods open forward.

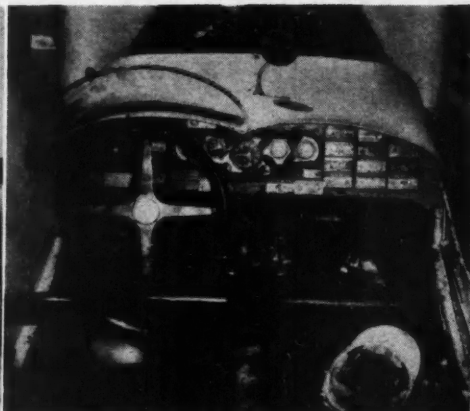
TRUNK CARRYING CAPACITY on both cars is about equal, with the Aston's being in a combination passenger-luggage area and the Thunderbird's completely separate.

FOR GETTING IN or out of the Aston Martin (and over the high siderail), wearing capris or a full skirt is advisable.

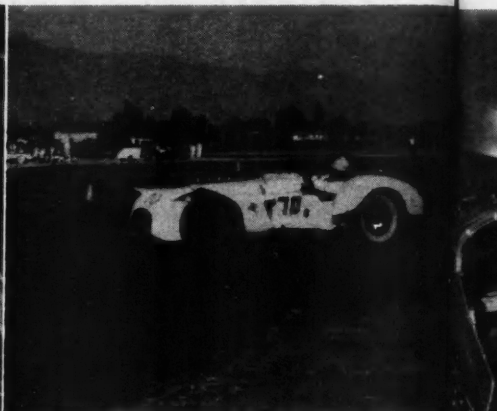
Scene at Santa Barbara...



Max Balchowsky's potent Buick Special, a very real threat at California road races, at rest.



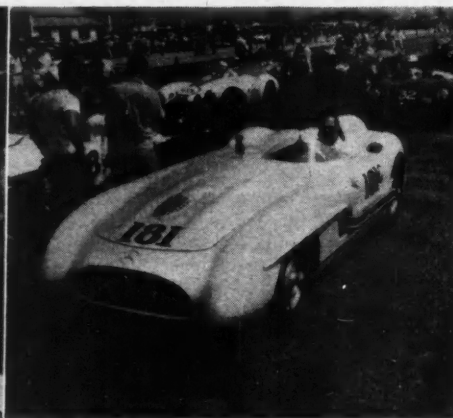
Cockpit of the all-business Balchowsky machine, dash nearly filled with plaques denoting wins.



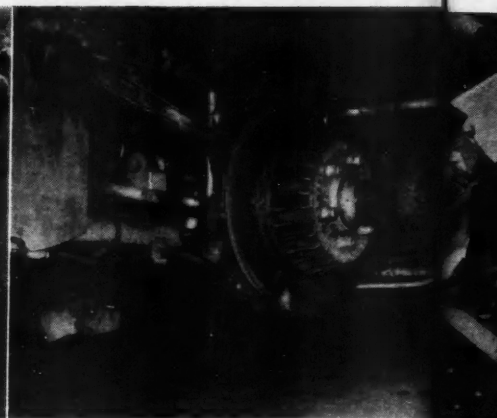
Grab shot of same car pouring it on out of turn 9 on the Santa Barbara circuit, Max at wheel.



Engine compartment, Bill Murphy's Buick-Kurtis Special. Fuel-injected mill ran in B-modified.



Chuck Porter's gleaming Chevy-powered Mercedes-Benz, displacing 4936cc, is a screamer.



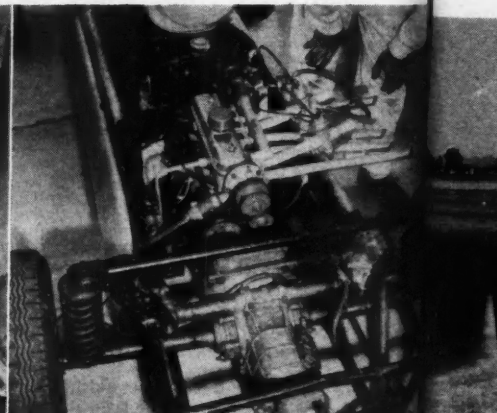
Spot brakes, Indy-type front suspension beef up Murphy car. Owner is from Culver City, Calif.



Aston Martin of Joe Lubin packs 3692cc, runs in C-modified class. Well-known Bob Oker is driver.



Cockpit, dash of Echo Renault owned by Alden Le Grand. One of 19 Formula III cars in hard race.



Le Grand's Formula III car with hood removed for access. Note compactness, roominess, engine fit.

Jim
bu

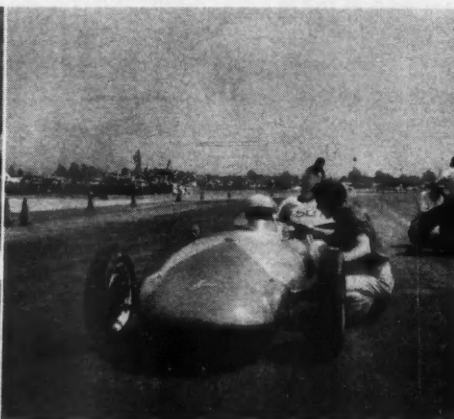
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158 Co
Car ski

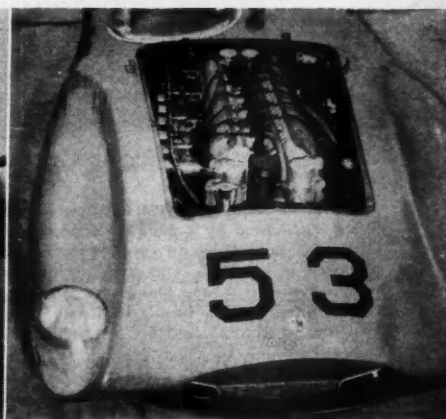
Labor Day weekend CSCC road race brings out the year's most interesting and fastest equipment—which "The Beast" proceeded to clobber, but good . . .



Jim Hall in cockpit of his Lister-Chevrolet. Air bubble on hood accommodates oversize engine.

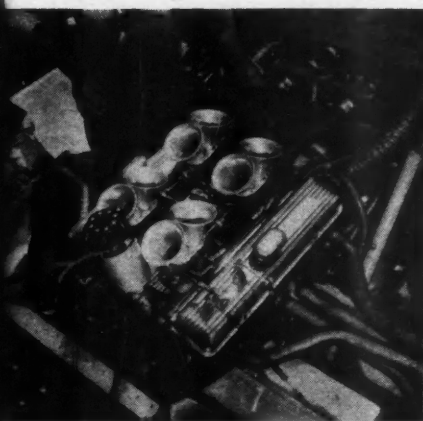


Motor Trend Tech. Ed. Chuck Nerpel at the wheel of his BSA-powered Formula III car gets advice.

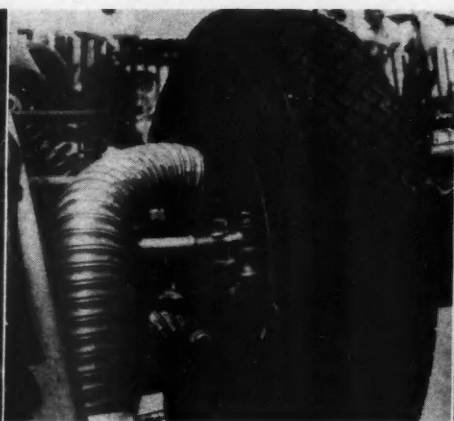


A gag nameplate is used to hide fact this car is powered by 4.4 Ferrari. Owner is Rey Martinez.

Photo Story by E. Pat Brollier



Our photographer grabbed this while hood of Jim Hall's Lister-Chev tilted. Note stack angles.



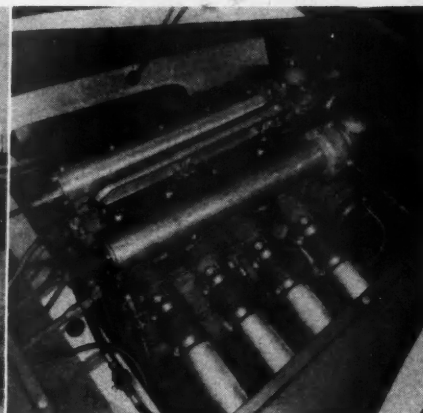
Ducting system for brakes on Hall car consists of large diameter flexible tubing top & bottom.



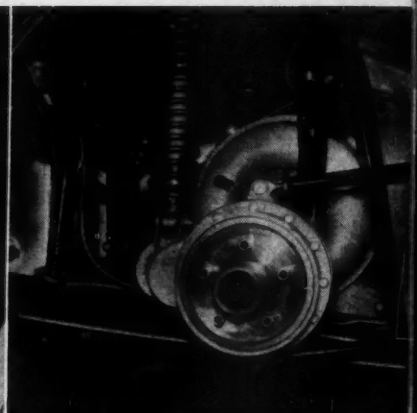
Low quarter angle of Lister-Chev. Hall, second from right, discusses point with race official.



158 Corvette driven by Skip Hudson won class. Car skims pylons on turn 9 same way each time.



De-tuned 3-liter Offy in Reventlow Scarab with gas-injectors was trial driven by Bruce Kessler.



Neat and costly, hydraulic shock-coil springing and turbo-shrouded inboard brakes on Scarab.

western people ...

by William Nolan

THE RAIN-SOAKED 1958 RACE at Le Mans was marred by a number of serious accidents, one of which carried the French driver, Mary, to his death. This tragic incident also involved the young, fast-rising 22-year-old California driver, Bruce Kessler of Beverly Hills. According to the accounts, Kessler crashed into the Jaguar when it spun in front of his Ferrari. These reports, however, were inaccurate—since at no point did Kessler's machine touch the stricken Jaguar. Now having recovered completely from his injuries, Bruce tells the true story of this spectacular crash.

"I'd taken over our two-liter Ferrari from Dan Gurney at approximately the 34th lap. At that time our position was fourth overall, thanks to Dan, and we both had hopes of finishing among the top three cars. But the rain had begun, and it became a blinding downpour soon after I took the wheel. I kept passing wrecked cars by the side of the

bruce KESSLER



Growing in stature with added experience, young Bruce Kessler is becoming a familiar sight at racing events everywhere. He makes an interesting photographic subject whether he's swapping tennis shoes for racing footgear, talking to a well-wishing fan, passing an opponent on the inside in the Scarab-Off, or chatting with long-time friend, Lance Reventlow.

PHOTOS BY
F. PAT BRULLIER
LESTER NEHAMKIN

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road, and narrowly avoided a crash on several occasions. It was almost impossible to see.

"Anyhow, the Frenchman Mary, in the Jag, didn't make the turn past Dunlop bridge and he hit the wall, being killed instantly by the impact. I came under the bridge and saw the shape of his car ahead of me in time to get on the brakes, but my front wheels struck the hood of his machine—it had landed in the road—and this piece of metal threw my Ferrari out of control. It headed for the retaining wall at well over a hundred. Now, this wall was hard-packed mud, like cement, and I knew I couldn't afford to be in the car when we hit. So I managed to vault up on the seat with the intention of jumping. But it all happened so quickly I didn't make it. I was standing in the seat when the Ferrari whacked into the wall, and the next thing I knew I was flying through the air, landing on one hip and sort of bouncing down on my back in the middle of the turn.

"I remember thinking: 'You've got to get up and walk or you'll be run over.' I could hear the roar of approaching engines and I was certain the drivers would never see me lying in the road. But I couldn't get to my feet; so I managed to roll off to the grass verge at the edge of the track just as three cars entered the turn. They hit my burning Ferrari and it was quite a mess. Luckily they were all okay.

"My right lung was collapsed and most of the blood vessels on my back were broken, but I hadn't snapped any bones, and the doctors claimed this was a miracle. Still, I was in bad shape at the hospital. Blood clots formed, and nothing, it seemed, could be done about them. Practically everybody at Le Mans came in to visit me, with loaves of bread and cakes and wine, but I didn't get any better. Finally I asked to be sent back to the States—and this did the trick. Our doctors over here fixed me up good as new."

Bruce claims he will be back for Le Mans next season—and for many other European events. The near-fatal accident didn't discourage him in his desire to compete under U.S. colors against the best drivers of Europe. Even his parents, Bruce claims, understand and approve of this desire.

"They've always been very proud when I did well in a race," says Kessler. "They're happy that I've decided on a career and that I've been able to do as well as I have in just a few years. Naturally they worry, but there is no conflict about my driving. Before I took up racing I didn't have any direction in life, no goals to follow."

In this respect, Kessler was much like his best friend, Lance Reventlow. Both had come from rich parents (the Kesslers founded the famed Rose Marie Reid empire) and both felt "no need to try for anything in particular." The boys met at a school in Arizona 10 years ago—and have been close friends ever since.

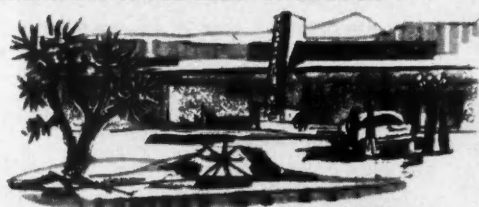
"I WAS ALWAYS BUGGED on cars," says Kessler. "When I was in my teens, hot rods were the big thing. I owned a full-house Olds 88 when I was 15—and within a couple of years I had a chopped and channeled Mercury convertible that really went. Then my mother bought an XK-120 Jag and I drove it around the block once and it didn't impress me much. I figured it would be worthless at the drags. But I heard about a sportscar road race they were having up at Santa Barbara and I was

(continued on page 92)

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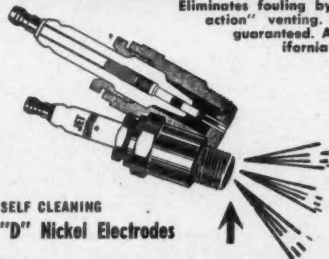
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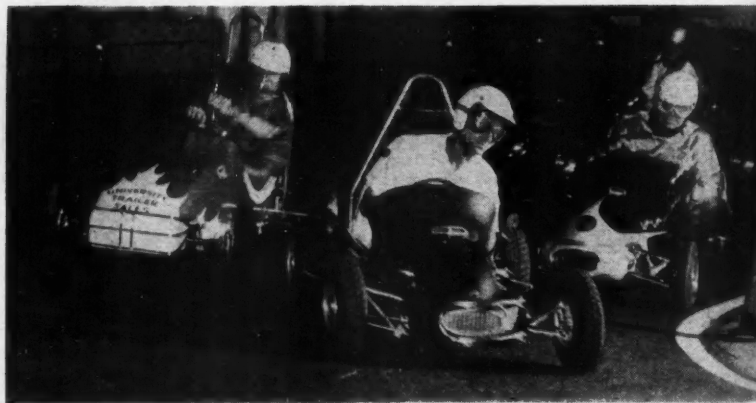
of western industry...



one-half midgets

HEADMAN BILL MOSS, AT LEFT, CENTER, DISCUSSES A TECHNICAL POINT ON THE 1/2 "MIDJET" WITH TECH ADVISER SAM HANKS.

**newest west coast activity
creates family fun for everyone**



FAMILY FUN participation is shown in this series of three pictures. Above, Son and Dad take a turn at the wheel separately. On opposite page, the family group demonstrates their enjoyment of intriguing sport.

LONGER FRONT SUSPENSION is independent on Moss MidJET. Tube shocks are slightly more inclined due to extended width. Center picture shows neat, accessible engine installation. All cars carry provisions for roll bars at slightly additional expense.

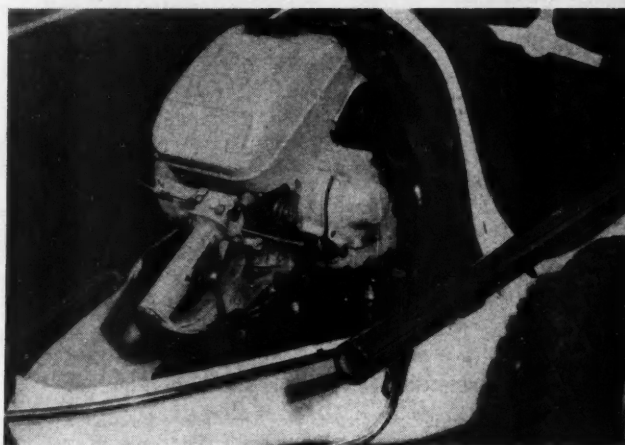
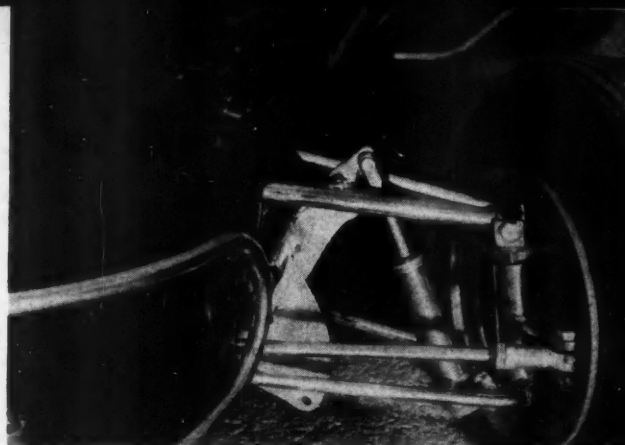
ONE OF THE FIRST designers and builders of one-half midgets is credited with beginning the movement to put flea-size racing within reach of the entire family. By being the first to build the now popular 1/2 midget, Bill Moss, head of Moss Engineering of Inglewood, Calif., has made it possible for everyone including Dad and Mom to fit into the picture.

The main difference in the newer cars is a six-inch-longer wheel-base, but they are constructed with exactly the same quality and care as the quarter midgets. Available with or without engines, the Moss "works" cars feature a sturdy steel frame capable of even further expansion, to micro-midget specifications. Without powerplant the complete car is available for \$535. Bodies are all Fiberglas, suspension is independent, and steering is rack and pinion.

Two sizes of engines are available in the 1/2 midgets. First is a one-barrel, four-cycle Continental three-horsepower mill, installed and ready to race for a price tag of \$595. Alternate choice, at \$840, is a McCulloch two-cycle, single-cylinder engine with a seven-cubic-inch displacement and developing seven horsepower. This has a built-in centrifugal clutch.

All replacement parts for both models are available for immediate delivery. Provisions are made for roll bars, mandatory for youngsters on most tracks. Moss also manufactures a clutch kit that is adaptable to most engines to change the gearing from direct drive to centrifugal clutch control. Sam Hanks, Director of Racing for the Indianapolis Speedway and winner of the 1957 500-mile event, has been working with Bill Moss in a technical advisory capacity on this project.

The 1/2 midget has made it possible for the entire family to enjoy together the competition and sportsmanship of auto racing. *



PHOTOS BY BOB D'OLIVO



bruce KESSLER continued

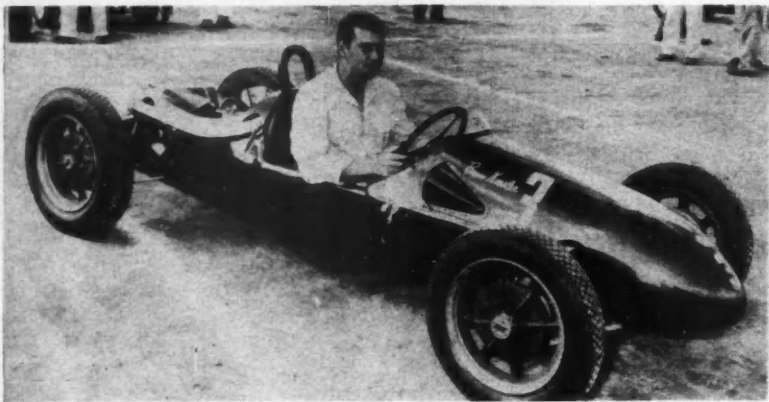
curious. Asked Mom if I could borrow her Jag for the weekend and she said fine—little realizing what purpose I had in mind!"

The date was September, 1953—and Bruce took third in the event in the borrowed XK. He was fascinated with this new sport.

"I was only 17, but the rules were not as strict in those days with regard to racing, so I managed to compete quite regularly."

The late "Pappy" Pedigo helped young Kessler a great deal, teaching him the arts

with Ed Hugus. Our car was identical with the other team entries. Instructions were not to exceed 7000 rpm in practice and this is exactly what I followed. But when I came into the pits I was accused of over-revving the engine—as I had lapped about 12 seconds faster than the other team drivers, excepting Maglioli, and they claimed this was impossible within the limits set up for us. So I never got a chance to handle the car in the race itself—which upset me a great deal. And, as



BRUCE KESSLER received valuable race training in his Formula III Cooper.

of downshifting, cornering, etc. That first season saw him win the Pismo Beach Hill Climb with the Jag, setting the course record for the twisting dirt-road event. He followed this by nabbing second overall behind Jack McAfee's 4.1 Ferrari at Willow Springs.

At 18, in Seattle, Wash., Bruce won the production car event in the Seafair races—and he came back to California to team with Lance Reventlow in the latter's 300-SL. (They won a silver trophy at Torrey Pines late in 1955 with this car.)

"In September of 1956, after several class wins in a Formula III Cooper, I sold the car to Harry Morrow and went East to work as a salesman in our New York office. I still was not sure I wanted to go into full-time competition. While in New York I ran into some sportscar people and they got to kidding me about the worth of California drivers. Claimed all the best drivers were in the East. Well, this bugged me a little, and I told them I'd prove we could go just as well or better. Well, six months later I was on the grid at Lime Rock, Conn. in a Testa Rossa Ferrari against the entire team of Cunningham D-Jags. I managed to stick right with them through the whole race and John Fitch, Walt Hansgen and I crossed the line within the same second. It was a real frantic finish!"

Next Kessler won several class events with the Testa Rossa at circuits like Marlboro, Thompson and Cumberland, often defeating much faster cars in the process. The energetic young Californian gained the respect of polished veterans like O'Shea, Hansgen and Fitch. It was in fact Fitch who was responsible for Kessler's first ride in Europe.

"John recommended me as co-driver on an RS Porsche Spyder at the '57 Le Mans event," Bruce relates. "I was okayed to drive a privately-entered Spyder under factory control

it turned out, all the other team cars but ours dropped out. I just sat there on the pit wall feeling miserable while our Spyder continued to go 'round for the full 24 hours."

IMMEDIATELY AFTER THE RACE Bruce and Lance Reventlow took off for Modena, Italy, where arrangements had been made to allow them to test a Formula I Maserati and several fast new sportscars on the autodrome.

"Phil Hill was with us," says Bruce, "and we all had a very enjoyable time out at the track every day, roaring around in Coopers and Oscas and Maseratis. Of course the Formula I job was by far the most exciting. At first this car scared me. I mean, where you'll be approaching a corner at say 120 in a sportscar you'll get there at 140 in the Grand Prix machine—and you're still picking up speed. You move into the corner so fast that you tend to go right by your shutoff marker. My first reaction at a time like this was: 'I don't have a prayer of making it around the turn!' Of course I was wrong. The car stops so fast and handles so well you make it with room to spare. But it seemed I had to force my whole body to work faster in order to control the car. It's like being in a projectile."

Bruce did exceptionally well at Modena—well enough in fact to rate the following from the usually reticent pages of Britain's *Motor Racing*: "Being tested on Grand Prix Maseratis at the Modena Autodrome were the two young Americans, Lance Reventlow and Bruce Kessler . . . After two years of successful competition motoring in California, Kessler came to the East Coast of the U.S. and proceeded to show just what could be done with a two-liter Testa Rossa Ferrari . . . Here at Modena Kessler tried out the team Maserati and made a very favorable impression. His time of 1 min. 4 secs. is the

best ever recorded by a newcomer and compares well with Behra's 1 min. 1 sec. in the same GP car."

After spending three weeks at Modena Kessler returned to the States "to sell swim suits for awhile." He went to work as a Rose Marie Reid salesman on the West Coast for a few months, but racing was now the biggest thing in his life. He told his parents he was certain now of his plans.

"In February of this year," he said, "I decided to quit the firm and give my full attention to racing. Sebring was coming up and I wanted to be ready."

At the famed 12-hour contest in March, Bruce and Paul O'Shea co-drove their Gran Turismo Ferrari to a first in class and a fifth overall in the general standings.

Another trip to Europe followed—and Bruce drove superbly on Germany's difficult Nurburgring, leading his class all the way in a GT-250 Ferrari.

"We were leading the other GT machines by 12 minutes after about three hours," states Kessler. "My co-driver, Picard, took over and hit some oil. Our Ferrari ended up in a ditch. But it was great fun while it lasted!"

At Silverstone this year Bruce got his first chance to drive a Formula II Cooper in an international event. In the Daily Express Trophy Race he finished in sixth position after driving what one reporter described as "a very smooth, intelligent race."

KESSLER INTENDS TO GO ON competing in Europe, but he feels many of the circuits over there are extremely dangerous. "A lot of the time," he points out, "you're running on very narrow roads at high speed. Many of these roads have a rough crown in the center—and it is everything you can do just to hold the car on the road at anything over a hundred. If you lose it you've usually got a tree or a stone wall waiting for you. Luckily we don't have to cope with circuits like this in the States. A course like Lime Rock, for example, gives you real uphill-downhill road racing through some of the most beautiful country in the world, but it's a safe course in that it has been designed with the driver's interests in mind from the outset."

In the first USAC pro race at Lime Rock in September, Kessler managed an overall second in a 3.5 Ferrari, close behind George Constantine's new 3.9 Aston Martin.

Kessler intends to support the professional sportscar movement here in the U.S. since he believes that pro racing is here to stay. But just how much support he will be able to give depends largely on his commitments in Europe. At the moment things are "up in the air" for 1959. He may drive for any one of several sponsors. (Certainly a season with Reventlow's Scarabs is a possibility.)

"I owe whatever success I've had to many people: my parents, friends like Lance, to drivers like Pappy Pedigo and John Fitch and, especially, to Luigi Chinetti who had enough faith in my ability to let me handle his cars on many occasions. Thanks to them, I believe I may be able to accomplish something worthwhile in the sport."

For the young challenger from California, therefore, the future looks very promising. In five short years, from a hotrodder of 17, Bruce Kessler has risen to a respected place among this nation's top drivers. Wherever he continues to compete he will be a proud addition to the ranks of America's best. *

What's Happening in the West

FROM A STATE PLAGUED by stiff ordinances and an utter lack of facilities for motor racing in any form, Colorado will soon become a motor sports center when the new 430-acre Colorado Motor Raceway is built at Castle Rock.

Rushing toward completion by the end of September, when the first events were scheduled, the Raceway has fired the imagination of Western enthusiasts. The giant tract, 25 miles from Denver and 35 miles from Colorado Springs to the south, will combine a half-mile dragstrip, a half-mile oval for stock car and sprint racing, a 2.7-mile sportscar course, and a dirt oval in the northeast corner for motorcycle racing.

The Raceway's site offers a central spectator point from which all activities may be viewed simultaneously, parking space for 15,000 autos, naturally landscaped mountain atmosphere and every feature for national and regional sports and racing car events.

Development of the Raceway traces back to the interest of Tom V. Garraway, currently vice-president and chairman of the board of directors. Garraway, owner of clothing stores and drive-in theaters in Mississippi, is a rabid racing enthusiast who recognized an intense interest in motor sports in Colorado. Even though the company building the course, Colorado Motor Raceways Inc., is financing the project through the sale of \$290,000 worth of stock, Garraway personally underwrote \$160,000 for land purchase and construction work.

Teamed with Garraway is Sidney Buka, Raceway president, a Denver businessman and head of Colorado's Horseless Carriage Club. Other officials are Alex S. Keller, vice-president and a Denver attorney, and John W. Low, another attorney with a penchant for sportscar racing who is acting as secretary for the Raceway. Directors include Preston W. Marble, an imported car dealer; Don M. Rounds, an independent oil operator; and Sidney Langsam, Denver businessman. All of these men are perhaps better known at the wheels of sportscars than in their business lives and each brings his personal enthusiasm into the project.

Raceway tracks are asphalt covered over a heavy prime coat and sealed against weather. The half-mile dirt track for motorcycles will

follow national association practice with separate bleachers, pits and service facilities. Temporary bleachers at strategic points on the course will accommodate 12,000 persons, and the entire course system will be surrounded by a chain link fence.

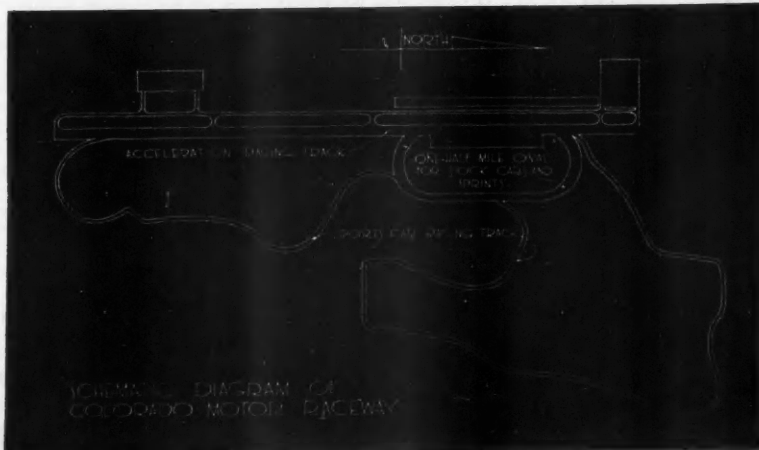
Programming is based on an agreement with CAMS, the Colorado Association of Motor Sportsmen, which will sponsor a minimum of 16 events per year. Two events monthly will be held during the summer months. During the remainder of the year, CAMS agrees to put on at least one weekend event per month. Five of the scheduled races include one national, two regional and two local sportscar events. The balance of the year's competition will be distributed among hot rod and motorcycle racing, sportscar gymkhanas, classic and antique car shows and dragstrip meets. CAMS has a 20-year contract with the Raceway and receives first choice of dates. Unscheduled days may be used by the Raceway for events of the directors' choice and will include stock and sprint car racing for about 50 per cent of the total racing program at the course.

CAMS' contract provides that they will receive 10 per cent of the gross receipts for the events they sponsor. For this CAMS will provide trophies, judges, timers, flagmen and necessary race personnel. The Raceway will provide police, parking attendants, ticket takers and maintenance. Maintenance costs, incidentally, are estimated at \$60,000 a year.

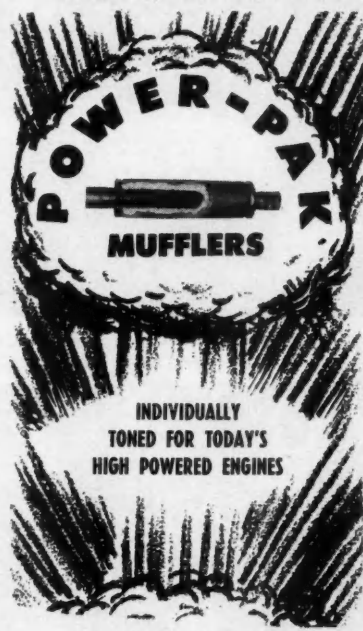
A grandstand at the half-mile oval will seat 2500 spectators, but for the other events the Raceway builders have found that viewers prefer to move about, watching different racing areas during the day. To this end, parking and spectator sections have been provided on several flat locations. Patrons may line the fence or sit in bleachers.

Recognition of the course by the Sports Car Club of America, already granted, will assure some top amateur talent in forthcoming national races and a tremendous boost for sportscar racing in the area.

An indication of the potential of the course and its future success is shown in the more than 1000 letters from interested sportscar associations, hot rod clubs and dragstrip racing groups. All are seeking use of the facilities in the future. —Gene C. Creighton



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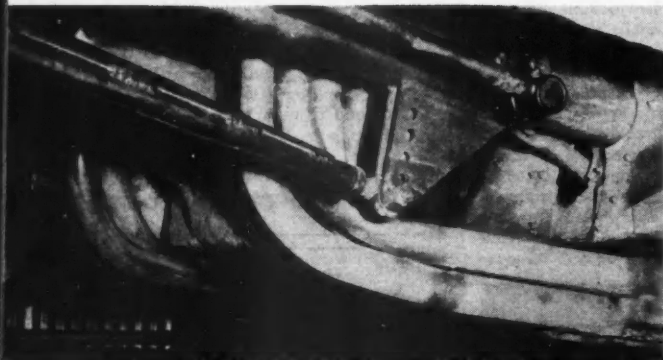
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CO-OWNER Frank Davis drifts under checkered pennant in "Purina Feed Sack Special." Car runs in Class C.



BULB-TYPE beeper horn (right of gear lever) suggests frivolity of owners, but the car in action does not.



"BUNCH of bananas" exhaust stacks barely clear wish-bone arms and meld into straight pipes on each side.



PHOTOS BY KEN HARDIN

M-D *Special* from Texas...

ONE DAY A MAN NAMED Stormy Mangham watched some sportscars nip around the concrete of an abandoned Texas airstrip. He watched hard and with an eye carefully trained in the scope of powered vehicles. Then he came to a conclusion over which veteran competition drivers around the Southwest are still cussing. Spouted Mangham, in a mood obviously bothersome to him: "These things here . . . these here things, they just don't go fast enough."

So, Mangham decided to build a sportscar.

To help him with the chore, Mangham selected Frank Davis, a wiry, steel-eyed mechanic. Together the men went to work under a shade tree at Mangham's private airport in Smithfield, Tex., a tiny hamlet near Fort Worth. Eleven months and approximately 1000 man-hours later a car was produced, which has sent less ingenious competition teams to their horsepower catalogs.

They call this vehicle the Mangham-Davis Special, though Mangham says, "Most everybody calls it the Purina Feed Sack Special because of the red and white checkerboard paint job we got on the rear end here."

For the record, the M-D Special has won eight of 12 races, with three losses coming on wet courses. It has beaten Carroll Shelby in three races—the only three in which they were matched. The car has never spun out and has left the course only once in 12 races—and that as a safety precaution.

Davis, of course, drives the M-D Special and is one of the nation's outstanding driver-mechanics. A tribute to his skill is the fact that the M-D Special has 1400 miles of wide-open racing on it and has never suffered any serious mechanical problems.

In his last race, the Texas Championships in Fort Worth, Davis broke the course record three times on consecutive laps with his best reading being 1:59.5 over the 2.9-mile course. Yet, he's really not sure just how fast the car will travel. In this race the speedometer failed and stuck on the 152-mph mark. For the quarter-mile the car can accelerate to 117 mph.

At the beginning Mangham and Davis decided to build an honest Class C car, so they selected the engine, basically a Chevy design which was made to produce 162 horsepower and displace at 4.9. This, obviously, was not enough horses so Davis began a long and precisioned process of modification on the carburetion, exhausts, cam, stroke, ignition, valves and valve springs until the present accumulation of 325 horsepower was reached.

The M-D Special uses a simple three-speed transmission; the wide range of the Chevy engine with its terrific low-end torque made multiple gears unnecessary. Further, the car is not downshifted for turns since Davis feels it is a waste of time. Second gear is used solely for acceleration out of slow corners. Shift point is 105 mph to high gear.

The body is a modified Devin and the car is about 200 pounds lighter than cars of its class. It weighs 1800 pounds while a 4.9 Ferrari weighs 2000.

Mangham and Davis spent a mere total of \$2500 on construction, which is only slightly more than the cost of the braking system in a 4.5 Maserati. Yet in most of its races the \$2500 Purina Feed Sack Special ungraciously showed its checkerboard to cars with almost 10 times its monetary value, including the big Maseratis with the \$20,000 price tags.

—Jerro Todd

NEST of staggered carburetors perches trimly between banks of 325-hp Chevrolet V8 in Mangham-Davis car.

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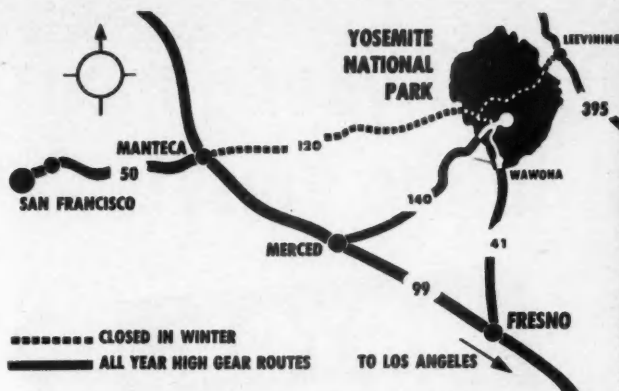


"Through the mountains to the Park, we were glad that we carried water bags. Even for these classics, this road was a high gear road . . ."

Classic Caravan to YOSEMITE

"On the valley floor there are sights galore: Half Dome (seen here in the background, rises 8850 feet into the sky and is probably Yosemite's most famous rock formation), the wedge of granite called El Capitan, wispy Bridal Veil Fall, and the 2425-foot cataract known as Yosemite Falls. Down here in the valley the snows come around December 20th and spring returns April 1st. Accommodations vary considerably, so it's wise to check with your travel agent, or write Yosemite Park and Curry Co. in San Francisco or Los Angeles . . ."





"Yosemite National Park is 208 miles from San Francisco, 312 miles north of Los Angeles, and can be reached by several different routes. The Tioga Road (the road to high country and over to Leeving) is snowed in about November 10th and reopens June 15th. We went by way of 99 to Fresno, then up 41 . . ."

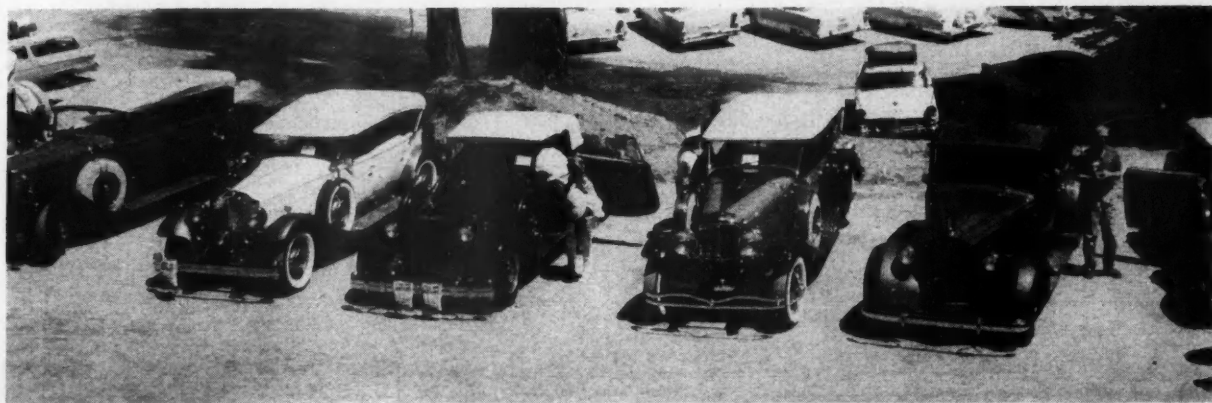


"A problem sometimes shared by newer cars—overheating—plagued some of the cars on the mountainous grades of the Ridge Route. At this point, a '33 Lincoln coupe had a flat. While the owner was repairing it, the left rear went flat. Luckily, it carried two spares in the fenderwells . . ."

by Robert J. Gottlieb
Classic Car Editor

"Parked in the shade to cool off are some of the 14 cars that made the trek. Included were six Lincolns (ranging from a '24 phaeton through a '42 Continental), six Packards (ranging from a '32 phaeton through a '40 Bohman & Schwartz sedan), a '32 Duesenberg phaeton by Murphy, and a '31 Studebaker roadster . . ."

"A needed rest in the parking area at Glacier Point, 16 miles off the main Yosemite road and 7214 feet high. It's from here that the famed 'Firefall' takes place each evening during summer. A huge bonfire of fir bark is pushed over the 1000-foot precipice, making a glowing red stream that lasts for three minutes . . ."



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- BUY QUALITY CLOTHES** - 95%
buy suits and shirts by brand name.

*Based on 1 time page rate. ABC Circulation 100,000 - Readership 400,000

** (latest Bennett-Chaikin Survey)

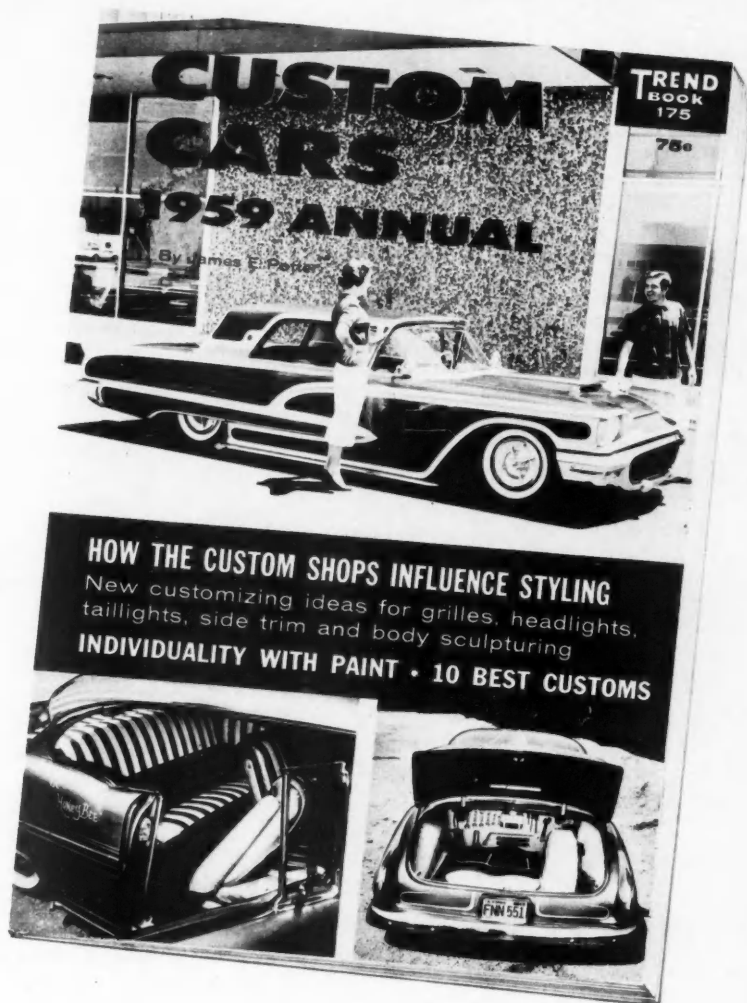
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